A COMPENDIOUS

METHOD

For the RAISING of the

Italian BROCOLI, *Spaniſh* CARDOON,

CELERIAC, FINOCHI, and

Other Foreign KITCHEN-VEGETABLES.

As alſo an

ACCOUNT

OF THE

LUCERNE, ST FOYNE, CLOVER,

And other *Graſs-Seeds.*

With the Method of *Burning of Clay*, for the Improvement of Land.

The SIXTH EDITION.

To which is added,

A DISSERTATION on the *Cythiſus* of the Ancients, a Plant which may be ſucceſsfully made uſe of for the Improvement of the moſt dry, barren Land. Alſo an Account of the great Profits which ariſe from ſowing the *Lucerne* and *Burning of Clay.*

By *STEPHEN SWITZER*, Author of the *Practical Fruit* and *Kitchen-Gardener.*

Quare agite, ô, proprios generatim diſcite cultus,
Agricolæ! ---------- VIRG.

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THE PREFACE.

IT is not above a Week or ten Days ſince that, at the Deſire of ſeveral Gentlemen, who do me the Favour to deal with me in Garden Seeds, I have ſet about drawing up this ſhort Account; the good-natur'd Reader will not then wonder, that from ſo haſty a Birth this Piece comes out miſhapen, decrepid, and lame, and not able to make it's Way into the World; and indeed all that I can ſay in it's behalf is, that moſt of the Particulars herein contained are the real Reſult of Practice and Experience, and the reſt the moſt reaſonable, and parallel Deductions I could poſſibly make therefrom.

I have not taken upon me to uſurp the Office of the Cook, in ſetting down all that might be as to the dreſſing the ſeveral Herbs following in this Account, that not being my Province; but whoever has a good Cook, or reads the Books which are publiſhed in that Art, will ſoon find to how many uſeful Purpoſes the following ſhort Collection of Herbs are applied; how much theſe and many other Plants that grow in a Garden contribute to the making a good Dinner; how much, if moderately us'd, to Life and Pleaſure itſelf.

I have,

I have, in the first Place, begun with BROCOLI *to be boiled, a Sallad that has been some Time among us; but our not knowing how to manage it, has brought a kind of Disreputation upon it, though there have been, and are still, many Advocates for it; and, if well managed, is, in my humble Opinion, next to the true Asparagus, the best boil'd Winter Sallad we have, at least much better than any other kind of Sprouts that grow, and is in Season when nothing else equal to it can be got.*

The CELERIAC *is the next Herb I have endeavoured to promote the Use of: Those who have eat it abroad say, that it is much better than Common Celery, inasmuch, as it grows thicker and smaller, and eats much shorter, and has a more exalted Taste. I must confess, I don't know it by that Name, nor do any of the Seedsmen that I have met with at this End of the Town; but a Gentleman in the City, who has long been a great Importer of all curious Seeds, (and of whom I have bought my Seeds) has it from* Alexandria *by that very Name; and if it be no other than what is commonly known by the Name of the* Italian Celery, *it is, in my Opinion, much to be preferr'd to the common Sort.*

The Spanish CARDOON *is the next Plant I have recommended to the Cultivation of the Curious, because, I think, when it is well whiten'd, it eats much better in Soups than* Celery; *and being stew'd in a Pan, eats a great deal shorter, perfectly melting in one's Mouth; and besides all, may be continued under Glasses, or in a Green-House, all the Winter, and is not so apt to run to Seed, or grow tough and sticky in the Spring as Celery does.*

The FINOCHI, *or* Italian Fennel, *is the next Herb I recommend to be propagated: It has been but a few Years amongſt us, and in the Hands of a very few; the Right Honourable the Earl of* Peterborough *being almoſt the only one that has brought it over, or knows its Vertues and Uſes; but it is a Plant of ſuch wonderful Properties in refining the Blood, exhilerating the Spirits, and ſtrengthning the Stomach, that I am ſanguine enough to believe, that were it poſſible that there were Virtues in any one Plant in Nature, capable of introducing Immortality among Mankind, this would do it.*

Something has been added as to ALISANDER, MUSHROOM, &c. *but for that, I refer my Reader to the Treatiſe itſelf, and, before I go any farther, ſhall anſwer an Objection, which I find is like to be made againſt this Pamphlet by the Ludicrous and Ill-natur'd, who will perhaps aſk why there is ſuch a Pother about a little* Brocoli, *and a few other Plants well enough known in* England *long before this. To this I anſwer, that if they are known, it is only to a few; and the making the Knowledge of it more univerſal amongſt Mankind will, I hope, contribute more to their Diverſion, Health, &c. than all the wiſe Conundrums of thoſe pretended Wits.*

But that this ſhort Treatiſe may not come into the World unattended with ſomething, which is very ſolidly uſeful, I have added in the laſt Part of it the beſt Methods for raiſing of Graſs-Seeds, which has been of great Uſe and Advantage to theſe Kingdoms, and rais'd the Value of Eſtates more than any one Piece of Huſbandry in Uſe in England, *and have endeavoured to make the Method of raiſing that valuable Graſs the* Lucerne *more public.*

The

The laſt Thing I have attempted, is the Method of burning of Clay, which may be juſtly deemed the cheapeſt and moſt uſeful Improvement that this or any other Age has found out, by which Gentlemen, may improve their Eſtates much cheaper than they have before; for if Fermentation be, as I think it undoubtedly is, the Axis on which the Scale, or rather the whole Wheel or Circle, of Nature turns, both in the Vegetable as well as Animal Syſtem, no wonder that the Coldneſs of our Soil, the Denſity of our Air, and which is more than all, the great Calamity of our Climate, the great Rains which fall in the Spring; then, I ſay, ſurely thoſe auxiliary Dreſſings and Improvements, which I have mentioned in the latter Part of this Treatiſe, muſt needs be of the greateſt Uſe to all Huſbandmen and Farmers.

April 1728.

A Com-

A Compendious

METHOD

For the RAISING

Italian Brocoli, Spaniſh Cardoon, Celeriac, Finochi, and other foreign Kitchen-PLANTS;

So as to make them more uſeful Diſhes than they have hitherto been.

BROCOLI (not *Brocula*, as by ſome erroneouſly wrote) is, according to Mr *Evelyn* in his *Acetaria*, the *Helmerida*, or rather (as *Delacampius*, in his Edition, will have it) the *Ilmerida* of *Pliny*, a Kind of *Italian* Kele, or Colewort, which grows on the Sea Coaſt about *Naples*, and other Places in *Italy*; from whence the beſt Seed is yearly exported, that which is ſaved in *England* being little worth.

I am inform'd by a Perſon who was for ſome Years Gardener to the *Britiſh* Embaſſy at *Conſtantinople*, and came over with Mr *Wortley Mountague*, to whom he is now Gardener at *Twickenham*, that *Brocoli* Seed will do well ſeveral Years, having ſown it for 5 or 6 Years ſucceſſively, in his Ma-

ſter's Garden, and it holds the ſame as it was at firſt, and I have ſome of his Plants now growing by me, which are like to prove well; from whence the Conjecture of its not doing well above one Year aroſe, I cannot tell: The great Difficulty in getting good Seeds from abroad, and the great Cheat thoſe People, who gather it on the Sea-ſide, put upon the Merchant, and conſequently upon us here, has been the greateſt Hindrance to the uſing it this Year: For tho' I ſaw a Bag juſt brought from the Water-ſide, and mark'd with an *Italian* Mark and Character, and ſaw the Bill of Parcels, in the Importer's own Hands, yet when it came up, it was nothing elſe but Turneps; ſo little Faith is to be found amongſt thoſe Collectors of Seeds, who no doubt think it no Sin to cheat Heretics. Therefore I ſhall for the future offer no Seeds to ſale which come from abroad, but what I have try'd in my own Garden.

There are three ſeveral Kinds, *viz.* That with ſmall whitiſh-yellow Flowers, like the Collyflower; others like the common Sprouts and flowers of a Colewort; and a third, which is, in my Opinion, the beſt of all, with purple Flowers; all which come mix'd together, none of them being as yet (at leaſt that I know of) ever ſaved ſeparate.

The Seed is in general to be ſown at the ſame Seaſon; and ordered, during the firſt four Months of its Growth, like the Savoy; but for the particular Method of Cultivation, the following Rules are to be obſerved.

In the firſt place, the Seed is to be ſown in a good Soil, full of Salts, and in the ſame Manner as Collyflowers, Savoys, and other Cabbages, about the latter End of *April*, or Beginning of *May*, that the Stems may be ſtrong enough, before

fore the Winter comes in to produce a larger number of Sprouts than otherwiſe they would, if ſown later.

The next thing to be done, is the tranſplanting them into the Nurſery-Bed as all other Plants of this Kind are, in about a Fortnight or three Weeks after they are ſown, and watering them in dry Weather, as occaſion ſhall require. When the Plants are ſtocky, and ſtrong enough, they are to be tranſplanted two or three Foot aſunder, on round Hills, like Hop-Hills, in a warm well ſheltered Place; for I find that even in my Garden, which lies ſo near *London*, our Winters are a little too ſevere for it, ſeveral of the green Tops and Flowers being ſo nipp'd and pinch'd thereby, that they have rotted and decayed away.

During its being planted thus out, it will form a Head like the common Colewort, ſome of which Heads (about a Fortnight before *Michaelmas*) muſt be entirely cut off, about a Foot and a half, or two Foot above Ground, from the Stem of which, thoſe Sprouts proceed which are afterwards to be boiled and eat as Aſparagus, and therefore by ſome called *Italian* Aſparagus; but I would not adviſe the heading your Plantation altogether: but divide it into three Parts; one Part at *Michaelmas*, the other part a Month after, and the laſt about a Fortnight or three Weeks before *Chriſtmas*; by which means there will be a continued Succeſſion of the Sprouts, from about a Month before *Chriſtmas* to *Lady-Day*.

As ſoon as the Heads are cut off, the Gardener ſhould apply ſome Sea-Sand or Cole-Aſhes, or ſome Pigeons Dung, which is as good, or better, than either, on Account of its fiery ſalacious Quality, in a Pan or Hollow made round the Root; and, if the Weather is dry, they ought to be well watered with Pond Water.

If it ſucceeds well, and likes its Soil, it will form a very fine Head, full of Sprouts, by *Michaelmas*, as it has done this Year with me; theſe Sprouts may be entirely cut off and eat, or given to your Swine, for they will ſprout out and ſhoot again before *Chriſtmas*; or you may preſerve ſome of the top ſmall Shoots till the Froſts come in, at which Time they will be in their greateſt Perfection; and even your large Shoots which came out before, may be cut off, and the outſide tough Part peel'd with a fine Knife before they are boiled, only uſing 6 or 8 Inches of the Top.

I alſo adviſe the heading of the *Brocoli* at ſeveral Times, becauſe the Sprouts will otherwiſe grow hard and tough; they ſhould therefore not only be headed at different Times, but the Sprouts, ſome of which will come on faſter than others, be gathered whilſt they are young, about ſix or eight Inches long, before they come to flower, and about the bigneſs of a Man's little Finger; and then it is, I think, an excellent Diſh.

If you have a mind to have a continual Succeſſion of *Brocoli*, to *Lady-Day*; beſides the Methods of heading at different Times, you may ſow more Plants at the latter End of *May*, or beginning of *June*; and again, the latter End of *June* or beginning of *July*, and they will grow ſtrong and come in well after *Chriſtmas*, but then you muſt plant them out in the richeſt warmeſt Soil you can, and not in wet Clay Land, where they won't do; theſe Plants ſtanding under a Reed Hedge, and on Hills, may, by the Application of Cole-Aſhes, long Dung, *&c.* be headed and made to ſprout again, all *March* and *April*; after which Time, Aſparagus, and other Vegetables, come in.

Note

Note alſo, that *Brocoli* is to be peeled and boiled like Aſparagus, while it is green, or after 'tis parboiled, and will ſtrip off in the Nature of Lupines, and when green, the knotty parts may be pared off.

CARDOON, generally called *Spaniſh Cardoon*, becauſe it is very much uſed in that Country, the beſt Seeds of it being imported from *Italy*, is, by *Botaniſts* called *Carduus Eſculentus*, or *Eating Thiſtle*, a kind of wild Artichoak, the Seed being formed in a Head, not much unlike the Head of that uſeful Plant.

For the Form of the Seed, raiſing, and Culture, take the following Account, being very near the ſame which was ſome time ſince publiſhin my *Practical Kitchen-Gardener*, *pag.* 160, which I repeat here, becauſe that Book may not fall into the Hands of all that buy this Pamphlet.

The Seed is of an oval Form, about the bigneſs of a Wheat-Grain, of a very dark green or blackiſh Colour, marked with black Streaks from one end to the other; the firſt Crop of which, is ſown about the Middle of *April*, and the other at the Beginning or Middle of *May*, on Beds well prepared with Dung, rotted to Mold, or on hot Beds when the Heat is going off; and after that planted out into Trenches or Pits, at they do Celery; but the *French*, as Mr *De la Quintinye* tells us, ſow the Seed immediately in Pits, a Foot wide, and ſix Inches deep, filled with good Mold, and in Beds made four or five Foot wide, in order to place in them two Ranks of thoſe little Trenches or Pits, chequerwiſe: They put five or ſix Seeds in every Hole, but with an Intention to let only two or three of them grow: if they all come up, they take away thoſe that are over and above that Number,

to ſupply thoſe Places where none come up, or any other Vacancies.

It is good to have ſome ſown on a hot Bed, or on a Bed where the Heat is expiring; theſe being covered with pieces of old Mats or Straw, ſhould be opened in fifteen or twenty Days to ſee if they ſprout; if not, you may conclude the Seed is bad, and ſhould ſow more. The Seeds of the firſt ſowing are generally three Weeks, and the laſt fifteen Days, in coming up; they muſt not be ſown before the latter End of *April*, or beginning of *May*, being apt to grow big, and run to Seed in *Auguſt* and *September*, when they are not good; for which Reaſon great care muſt be taken to water them, to hinder them from ſeeding; and towards the latter End of *October*, if you have a mind to whiten them, take the advantage of a dry Day, to tie up all their Leaves together with Bands made of Straw, or long Litter, well twiſted about them, ſo that the Air may not come at them, except it be at the very Top, which is to be left open.

Inſtead of earthing them up, as you do Celery, you are to apply long Horſe-Dung to whiten them.

Theſe Plants thus tied up and covered, will whiten in a Fortnight, or three Weeks, and grow fit to eat. Thoſe who make uſe of them to any Purpoſe, continue tying them up, and covering till the Winter approaches, and then take them up, and tranſplant them into the Greeen-Houſe, or Cellar, as you do Collyflowers to have them all the Winter; ſome of them are good to tranſplant in the naked Earth in the following Spring, to ſeed in *June* and *July*, or may, when cut down, be left to ſpring, and be whitened again the ſucceeding Summer.

The *French*, and many *Engliſh* Gentlemen eat them raw with Oil and Pepper; being, as they ſay, preferable to Celery.

Beſides the Uſes the *French*, as well as the *Spaniards* and *Italians*, make uſe of the *Cardoon*, in eating it raw; our *Engliſh* Cooks ſtew it in a Pan, as they do Celery, finding it much better, and that it eats ſhorter; and melts, as it were, in the Mouth.

An eminent Cook tells me, that *Cardoon* ought to be blancht, or infuſed in warm Water, half an Hour or an Hour (whereby the Bitterneſs that is natural to it, will be taken off), and then ſtewed with a little Butter, or Suet.

CELERIAC is a fine Kind of Celery, in great Eſteem about *Naples*; but the Seed is imported to us from *Alexandria*. It is undoubtedly of the *Petroſeline* Family, the Seed being ſo exactly like our Celery, that it is not to be diſtinguiſhed from it.

I cannot ſay that I ever ſaw the Plant, except it be what we have commonly had under the Name of the *Italian* Celery; but as it has been recommended to me by ſome very curious Gentlemen, I have procured a good deal of it from a Perſon who had it directly from *Alexandria*; and ſhould it be no other than the *Italian* Celery juſt mentioned, it would be a uſeful Plant, producing a much ſtronger Root, and conſequently a greater Number of Shoots, or Leaves, than our common Celery; and eats, in my Opinion, ſhorter, and not ſo tough or ſticky as Celery. It is alſo exceeding good in Soups and Pottage, the outſide being a little pared off; likewiſe a good *Aromatic*, and coming in, in a Cold Seaſon, is a very wholeſome, uſeful Plant.

I ſhall

I ſhall ſay little of the Manner of raiſing and whitening it, being ſo like the common Sort; but to prevent the piping or running to Seed of this, and all other Plants of this Kind, they cannot be too often tranſplanted, or dug about, even though they are put down again in the ſame Place.

Since the printing the 2d Edition of this Pamphet, I received the following Letter from a very ingenious Perſon in the *North*, who has the Care of ſome conſiderable Gardens belonging to the Right Honourable the Earl of *Burlington*.

Lanesborough,
July 13. 1728.

SIR,

HAVING *read the ſecond Edition of your Compendious Method of raiſing* Brocoli, Celeriac, *&c. and the Deſcription of that good Plant which you ſuppoſe to be the* Italian Celery, (*though very different from it*) *I preſume to ſend you this Account of it. The* Celeriac *is a low dwarf Plant, in Leaf ſomewhat like to common Celery, but much ſmaller, and the Root almoſt bulbous, or rather knobbed, and about the Size of a large Apple, or ſmall Turnip; and therein greatly differs from either the* Italian *or common Celery: Beſides, it is not ſo apt to pipe* (*as we term it*) *as thoſe other Sorts before mentioned, which being a peculiar Property of this Kind, makes it ſo very valuable to every one that has it.*

It may be ſown at any time in March *or* April, *on a hot Bed, and from thence planted directly in Trenches,* (*not deep, but almoſt at the Top of the Ground, becauſe being a ſhort Plant, the burying of it ſo deep as you do common Celery is needleſs*) *by drawing out the largeſt firſt, and ſo on to a ſecond and third Size one after another; and then you may earth them up, as you*

do

do common Celery, about a Month before you want it.

I hope, Sir, you will excuſe the Freedom I take in giving you my Opinion, having had a Reſpect for your Endeavours in Huſbandry and Gardening, ever ſince you commenc'd Author: Your Introduction to, and manner of handling thoſe beloved Subjects, (the Sale of which I have endeavoured to promote) is in great Eſteem with me; being (as I think) the moſt uſeful of any that have been wrote on theſe Subjects.

If on any Subject, you ſhall hereafter write upon, any Communication of mine, will be uſeful or ſerviceable to you, I ſhall be very ready to do it. I heartily wiſh you Succeſs in whatever you undertake, as it tends to a publick Good; And am,

Yours, &c.

THOMAS KNOWLTON.

FINOCHI, or *Italian Fennel*, is in high Eſteem in *Italy*, from whence it has been brought to *England* amongſt other Seeds, by the Right Honourable the Earl of *Peterborough*, in whoſe Garden, at *Parſon's-Green*, it is cultivated with great Succeſs.

There are ſeveral Kinds of it, but that which is the loweſt and moſt buſhy is the beſt.

It may be ſown at almoſt any Time of the Year, but *May* is the chief Seaſon: Though, if you have the Convenience of a Green-Houſe, or Frames, which are generally diſuſed in Winter, you may ſow it the latter End of *July*, or Beginning of *Auguſt*, and when houſed all the Winter, 'tis an excellent Diſh.

There is no more Trouble in ſowing and raiſing of it, than common Fennel or Celery; but

the Method of blanching or whitening, as practiſed by that Noble Lord, is ſomewhat different.

After the Seed is come up, and the Plants are ſtrong enough to plant out, ſet them at eighteen Inches Diſtance, or more, that you may commodiouſly come about them, to earth them up: They will want to be watered ſeveral Times, as the Heat of the Seaſon requires, in order to keep them from ſeeding, and to make them grow groſs and large; but the greateſt Care is in the blanching them. A very curious Nobleman, tells me, he plants it in ſtrait Lines, about ten or twelve Inches aſunder; by which means it has room to grow large, and be whitened with greater Eaſe.

After it is tied up, as you do Celery, you muſt earth it up with the fineſt Virgin-mould, or Sandy Loam, dungy Earth, being not only ſubject to make it canker, but taſte dungy and ſtrong, which is a good Caution in earthing up of *Celeriac*, common Celery, *&c.*

When it is whitened and fit to eat, cut off the Fangs, or long Roots of the Fennel, aswell as the fibrous Parts, preſerving the Knob with great Care; then pare off all the Outſide, both of the Root and Leaves, leaving only the Heart, and knobbed Root of it, in the Nature of a Pyramid.

I find Gentlemen differ as to the Method of eating *Finochi*; ſome chuſe to eat it green, others white; all which muſt be left to every particular Perſon's Option: But if it be to be whitened, you cannot be too careful in tying it up, and putting the drieſt, healthieſt, cleaneſt Mold, or Sand, finding by Experience, that it is otherwiſe apt to rot in the inſide.

I alſo

I alſo find, that *May* is too ſoon to ſow a general Winter-Crop, it being apt to run to Seed, being a Plant which ſeems not very proper to move; and ſhould be ſown in Trenches, as *Cardoon* is, becauſe by that means it may be blancht the better.

The laſt Year's Experience, and the Obſervations of a Noble Lord, who has raiſed a great deal for ſeveral Years paſt, convince me, that it is better to plant it in Trenches prepared as for Celery, at about ten or twelve Inches aſunder, three Seeds in a place, where they are to remain till they are ſhot up two or three Inches above Ground; and then the two weakeſt Plants are to be pulled away, and the other not to be moved but blanched; for as the *Finochi* makes only a downright Tap-Root, the tranſplanting it is not ſo uſeful as ſome conjecture. An ingenious Gentleman of *Brumpton*, has for ſeveral Years paſt preſerved it all the Year, even during the ſevereſt Froſts.

I think no body can object to the raiſing of this Plant at ſeveral Seaſons; and, if poſſible, in all the Months of the Year, by ſowing the Seed under Frames, and keeping the Plants earthed up, ſucceſſively one Crop under another. Sure I am, that there is not in the whole Compaſs of Nature a more noble Aromatic, a greater Reviver of the Spirits, or a greater Sweetner of the Blood, nor is there any Plant that can contribute to the Preſervation and prolonging of Life more than the *Finochi*.

It is generally eat by the *Italians*, with Pepper, Oil, and Vinegar, but the Noble Lord, of whom mention has been juſt now made, eats it with Salt only.

The *Italians* make a fine Water with it, called *Finochio*, which is very wholeſome, and in great Eſteem, which they tranſport to *England*.

I think it proper to adviſe the ſowing and covering it thinly in Drills, as Peaſe, but not ſo deep, being a Plant which, making but few Fibres, delights not in Removal; by which it may be the better earthed when you deſire to whiten it. This Plant, if uſed before it is too old and ſticky, and eat in a Morning, or indeed at any time of the Day, with Bread and Butter, Oil and a little Vinegar, is one of the wholeſomeſt Sallads in the World.

The MUSHROOM, being generally eſteemed a delicate Diſh, requires I ſhould enlarge upon it. The learned Lord *Bacon* in his natural Hiſtory ſays, that the Bark of white or red Poplar, cut ſmall and caſt into Furrows well dung'd, will cauſe the Ground to put forth Muſhrooms, all the Seaſons of the Year, fit to be eaten; and that ſome add to the Mixture leaven of Bread diſſolved in Water. Alſo, that if a hilly Field where the Stubble is ſtanding be ſet on Fire, in all ſhowry Seaſons it will put forth great Store of Muſhrooms. To which he adds, that Hartſhorn ſhav'd into ſmall Pieces, mix'd with Dung and watered, putteth up Muſhrooms; and we know, ſays he, that Hartſhorn is of a fat clammy Subſtance, and it may be Oxhorn will do the like.

The ſame Author complains that the Qualities of theſe Muſhrooms are apt to ſuffocate and empoiſon; and that they lie heavy at the Stomach, and are the Cauſe of what he calls the *Incubus* or Night-mare. But to purſue the Practice of raiſing Muſhrooms; We find the ancient Practice of our Gardeners has been only to make hot Beds, or rather to expect them to grow naturally on cold Beds; by which they appear to ſpring from the

the old mouldy Dung, as they do in Commons or Up-land Fields, from thoſe circular Tracts of mouldy Earth that are there found called by ſome the Fairy Dances. And theſe old Beds, when watered with Water wherein Muſhrooms have been waſhed, will produce an innumerable Quantity for ſome Months together. To this may be added, what I have ſeen in ſome old Books of Gardening, that Beds made of old dry mouldy Hay, Thatch, or muſty Dung, and watered as you make it up, will raiſe Muſhrooms very well.

But the *French* (particularly Mr *De la Quintinye*) are generally ſo curious in this, that they make Beds to ſerve for Muſhrooms in all Seaſons of the Year; though they cut not till about three Months after they are made, when their great Heat is ſpent, and the Beds are grown mouldy within. Theſe Sort of Beds are made in new and ſandy Ground, in which is made a Trench of about ſix Inches (as Mr *Evelyn* tranſlates it) but I ſuppoſe rather two or three Foot deep. Then they cover them with a Layer of about three or four Inches of the ſame Mould. They are raiſed in the Form of an Aſs's Back; and over the covering of Earth they lay another of five or ſix Inches of long dry Dung, which ſerves in Winter to ſhelter the Muſhrooms from the Froſt which deſtroys them, and in Summer from the great Heat which broils them; and likewiſe to prevent the miſchievous Effects of thoſe Heats, they water them gently twice or thrice a Week. Thoſe Beds that are for Muſhrooms are made under Ground, as Mr *De la Quintinye* obſerves, but thoſe that are for Melons, *&c.* above; but he adds not any Thing concerning the watering them with Muſhroom or warm Water.

Mr

Mr *Evelyn* tells us, that at *Naples* they raiſe them artificially in their Wine-Cellars, upon a Heap of Rock Earth, thrown upon a Heap of old Fungus's, reduced and compacted to a ſtoney hardineſs, upon which they lay Earth, and ſprinkle it with warm Water in which Muſhrooms have been ſteeped; and in *France* by making a Bed of Aſſes Dung, and when the Heat is in temper or abated, watering it as above, with Water well impregnated with the Parings and Offals of refuſe Fungus's, and ſuch a Bed will laſt 3 or 4 Years.

But more agreeable to Reaſon, and much to our preſent Purpoſe is Mr *Bradley*'s Method, who ſays, that all lovers of Muſhrooms are to be re-minded of looking into the Fields and Up-land Meadows, where they grow, under which they will find a ſort of Earth that is about their Roots, which is full of fine white Fibres or Threads, which have alſo ſometimes white Knots appearing, which contain all that is neceſſary for the Production of Muſhrooms, at any time of the Year; and muſt be kept dry till you uſe it on your Muſhroom Beds, the white Roots or Fibres being ſo tender, that they are apt to rot, in moiſt Places. Mr *Bradley* firſt ſhew'd me this kind of Earth, ſince which I have cauſed ſome to be dug up, which has thoſe Fibres, but have not yet had an Opportunity of trying the Experiment. This Earth, Mr *Bradley* informs me, may be kept for a twelve Month together, in large Clods in a dry Room; and when you have a mind to plant any, you muſt crumble the Clods as gently as you can on the Bed; and cover it over about half an Inch thick with good Mould, watering the Bed gently; which done, lay ſome Boughs over the Bed, and cover it with Mats in the Night from the Froſt.

Froſt. A Bed made roundiſh is much properer for this Purpoſe than one made flat. Theſe Muſhrooms come up in Spring and Autumn much better than in Summer and Winter, becauſe of the two Extremities of Heat and Cold, for which Reaſon the Beds ſhould be made round rather than flat, to throw off the ſuperfluous Moiſture in the rainy Months; and if they be under a little Shade where the glimmerings only of the Sun come, it is ſtill better.

The *French* Spawn is in great Requeſt amongſt Muſhroom Raiſers; but there is one kind in that Part of *Yorkſhire*, which they call *Craven*, which I am informed much excels it; inaſmuch as Mr *Ray*, in his *Hiſtory of Plants* (*ſub titulo Fungi*) tells us, it boils as white as a Curd; and I have heard from a Gentleman, in that Country, that about *York* itſelf they have a kind of Muſhroom, which pickles as white as Snow; ſo that if one could but produce the Spawn from thence, I do not ſee why it may not excel even the *French* Spawn itſelf.

This kind of Spawn, I find in the Tranſactions of the *Royal Society*, as given by Dr *Liſter*, grows in the Woods of *Marten* in *Pinnomoor*, in that Part of *Yorkſhire* called *Craven*, and have ſent to my Friend Mr *Knowlton*, who favoured me with the Letter concerning *Celeriac*, to procure me the Spawn of it.

The greateſt Difficulty is in raiſing it; for tho' you take all the Precaution imaginable, the Muſhroom will not be compelled by any Art we are Maſters of, to come up at our immediate Deſire; but when we have made all the Preparations we can, we are obliged to wait Nature's Leiſure.

And the more eager our Wiſhes are, the farther we ſeem to be from producing this valuable

Excre-

Excreſcence ; and I always found my ſelf diſappointed during my Attention to ſee them grow ; but upon going a Journey, or taking no heed at all, they then grew, as it were of themſelves.

When you take up the Spawn either on the Downs or in a Garden, in order to tranſport it, you muſt do it in as dry Weather as you can, putting it into a Bag, and if you do not plant it immediately, hang it up in a Place moderately dry ; being apt to ſprout in a moiſt Place which ſpoils the growth of the Spawn when you plant it.

No doubt, if you would plant the Spawn in Earth, in a moiſt Cellar they would grow, but how wholeſome they would be I cannot determine, being informed by Mr *Bradley*, that when he read Lectures on Plants, the Spawn and Button of the Muſhroom had viſibly ſwelled and increaſed, being laid in the Cellar only. In my Opinion, therefore, the beſt Way of raiſing Muſhrooms would be under an Awning, or Covering, like that in which we draw the dry Stems of Oranges which come from *Genoa*, keeping the Extreams either of Heat or Wet from them : Yet ſo that the Awning being open at both Ends may admit of a due Perſpiration or Paſſage of Air thro' it, taking the Awning away whenever the Dews fall, which are the only Advantage the Muſhroom has. Another Way might be, by making a Straw Cover, like that I have directed for the *Aliſander*.

I ſhall conclude this Head with a Receipt given me ſome time ſince by a *French* Gentleman, which he ſays is much uſed in *France* when they want Spawn.

The firſt Week in *Auguſt*, take a good Quantity of long dry Horſe-Dung, as free from the

Buttons

Buttons or Dunging of the Horſe, and as ſtrawy as you can get it; wet it, and work it, turning it twice a Week, 'till the middle of the next Month following; then make a Bed two Foot and a half or three Foot wide at bottom, and two Foot high, working it well, and letting it lie about ten or twelve Days, or a Fortnight at moſt; then put as much more on it of the ſame Stuff, working it well, and drawing it up in the Shape of the Ridge of a Houſe, and let it lie as long as before; then ſearch into ſome old Dunghil, and you will find ſome mouldy Cakes of Dung that ſmell like Muſhrooms, take up thoſe Cakes and break them into Pieces as big as your Fiſt, and then thruſt them into your new prepared Bed, at a Foot diſtance from one another; then cover your Bed two Inches thick with freſh Mould, and again with long dry Straw to keep it from Rain, which is the Bane of all Muſhrooms, and in *January* and the following Spring and Autumn, you will have Muſhrooms enough.

To the whitened and other Sallads I ſhall add that of whitening or blanching *Sweet Chervil* and *Parſley*; both of which are very extraordinary Sallads, being uſeful either in Soups, or to eat raw, as any of the Winter Sallads are; the Strength of the one being abated by whitening, as the Coarſeneſs of the other is raiſed thereby.

When you have a mind to whiten theſe two Herbs, you muſt ſow them in the richeſt Land you have, that they may grow as groſs as poſſible, about the middle or latter End of *June*, that they may get Strength and grow large enough, before Winter comes in, to whiten.

They will whiten with any ſort of Mould, but that which is of the Virgin-kind, and inclinable to Sand is beſt; nor is there any Difference in

the Care and Culture of it; for being once tied up and earthed when the Weather is pretty fine and dry, to prevent their rotting, they will be blanched and fit to eat in twenty Days, or thereabouts, and are of the Number of the higheſt Aromatics, as well as Diuretics, that Seaſon produces, the common Celery being too apt, without often removing, watering, *&c.* to run to Seed, and not to be had after *Chriſtmas*.

ALISANDER is a kind of Plant, or Winter-Sallad, not much known in *England*, nor is the Seed, as I know of, to be had here: It is often called the *Macedonian Parſley*, being undoubtedly of the Petroſeline Family; and its Excellence is, that you may have it clean, unſeeded, and unſticky, when the Celery is piped and gone.

The Seed is to be ſown about the latter End of *April*, or Beginning of *May*, pretty thin, becauſe it produces a great many large Leaves; about a Fortnight or three Weeks before *Michaelmas*, all the Stalks and Leaves are to be cut down, and the Bed cover'd again with long dry Dung, or Straw-Screens, ſo cloſe that the Froſt may not come at it; by which means the new Leaves that ſpring forth will grow of a whitiſh-yellow Colour, and tender.

It would ſeem a little ſtrange that this Plant ſhould be no more uſed, were it not that Celery, its near Relation, is its great Rival; but it has this to recommend it before Celery, that it partakes of almoſt all its good Qualities, and will, by the Treatment before mentioned, laſt much longer before it runs to Seed; which may not be diſpleaſing to thoſe that love to eat blanched Sallads a good while in the Spring.

BORECOLE *or* DANISH KELE, is by ſome prefered to Brocoli; as it is undoubtedly of the ſame Kind, ſo it is to be treated in the ſame Manner

Manner in all Reſpects, and in ſome hard Winters is to be preferred to it, on Account of its Hardineſs; and though perhaps not ſo groſs and tender, is full as ſweet.

Coves Murcianus, *or* Murcian Kele, is eſteemed by ſeveral Gentlemen, who have eaten it in *Portugal*, much ſweeter than Brocoli; the Sprouts come out and form a Head like an open Collyflower, which are cut off and boiled as Brocoli Sprouts are; I had ſome of the Seeds this Year from the Reverend Mr *Sims*, Chaplain to the *Britiſh* Factory.

In order to make a ſhort Supplement to my *Practical Kitchen Gardener*, it will not be improper in this Place, to ſay ſomething of the moſt neceſſary and beſt *Ligumens* and Sallads, which have been ſlightly touched upon in that Book.

The moſt uſeful Pease are *Barnes*'s, or ſhort early Hotſpur, the long Hotſpur, the *Eſſex* Roadings, for the firſt and laſt Crops; but for the Summer Crop, the Marrow Fat, *Spaniſh*, *Mulatto*, *Dutch* Admiral, blue Rouncival, Union Peaſe, Nonpareil or Nonſuch.

The *Flanders* or *Barnes* Hotſpur, are all one, having their laſt Name from one *Barnes* a Farmer near *Brentford* who greatly improved them; it is a hardy Pea, and is to be ſown on ſandy Land, under a warm Wall or Hedge, about the latter End of *October*, or Beginning of *November*, and muſt be often earthed up, and covered with clean Wheat Straw, to preſerve them in froſty ſnowy Weather; a few Coal Aſhes, Sea Sand, or Clay Aſhes, will help to preſerve them.

The ſecond ſowing of long Hotſpurs, and *Eſſex* Roadings, may be ſoon after *Chriſtmas*, and theſe will follow the firſt ſowed early Hotſpurs.

The third ſowing, at the beginning or latter End of *March*, are the Marrow Fat, *Spaniſh Mu-*

latto, *Dutch* Admirals, blue Rouncival, or Union Peaſe, and of the Nonpareil or Nonſuch, which is a very large find Kind of the *Spaniſh Mulatto*; it is beſt to ſtick them in the Summer: A Gentleman near *Hammerſmith* cuts the Marrow Fat off, and ſome ſerve the Union ſo, after he has eat the firſt Crop, and lets them ſpring again; they will, as he ſays, bear a ſecond Crop, but this I have not ſeen my ſelf.

Either of the two Hotſpurs, or *Eſſex* Roadings, may be ſowed about the middle or latter End of *April*, or beginning of *May*, for the laſt Crops, which will come in *September* and *October*, and part of *November*.

Of Beans, the firſt ſowing, about the middle or latter End of *October* or Beginning of *November*, is the Hotſpur, of which there are two Kinds, tho' ſome make a third, which are the *Spaniſh*, *Portugueſe*, and the *Venetian*, which having been planted often in thoſe hot Countries, grow ſmall, and conſequently being impregnated with fiery Particles, come in earlier than Beans often planted in this cold Climate.

The *Venetian* Kind come in quicker than the *Spaniſh* or *Portugueſe*, but if ſuffered to ſtand till they are old, are apt to eat bitteriſh, which is alſo the Fault of the *Spaniſh* and *Portugueſe* Beans.

The Beans for the main Crop, are the *Sandwich* and *broad Stoker*; but the firſt is by much the beſt, tho' the latter are better Bearers, and moſt uſeful in great Families. The *Windſor* Bean is raiſed on the ſoft rich Lands, about that Place and *Eaton*, from whence I procure my Seed.

Of Cabbage Lettuces, the hardeſt and beſt, both for Summer and Winter, are the Brown *Dutch*, a white Seed, and the *Genoeſe* Black *Spaniſh*, or *Capuchin* Lettuce (for it goes by all thoſe Names) a black Seed, both which

are like the common Cabbage, and differ only in their Colour, the one of which is of a reddiſh brown Colour, the other blackiſh; as they are very hardy in Winter, ſo they are not ſo apt to run to Seed in Summmer as the *Turkey* Lettuces, which are otherwiſe more valuable, therefore more uſeful for Soups, *&c.* theſe are to be ſown at *Michaelmas*, *Candlemas*, *Lady-day*, and about the Beginning of *June*.

The *Sileſia* Lettuce has been long in Vogue till the *Turkey* Lettuce took Place; and the Winter *Sileſia* is very valuable for it's Hardneſs in ſtanding the hard Weather, and is to be ſowed about *Michaelmas*, *Candlemas*, and *Lady-day*, but the beſt of all is the Imperial, and White or Yellow, and dark Green *Cos* Lettuces, which ſowed at *Michaelmas*, and carefully preſerved under Glaſſes all the Winter, make a moſt excellent Sallad, eſpecially the laſt, being a little helped by tying in *April* and *May*, and by after Sowings all the Summer, but if not planted in the Summer in ſhade, are too apt to run to Seed.

The White or Yellow *Cos*, (which is alſo called the *Braſil*, *Verſailles*, &c. on account of ſome extraordinary good Seed, which has been brought from thence, is of a foreign Extraction, deriving it's Name from *Cos* or *Cous*, one of the Iſlands of the *Archipelago*, and not from the Iſland *Corſica*, as ſome erroneouſly imagine) is the ſweeteſt, and moſt criſp of all; the right Kind is not known to all who deal in Seeds, but the dark Green, which comes alſo from the ſame Place, being a black Seed, like the *Capuchin*, is more generally known, than the other; as are alſo the Imperial, *Roman*, and curl'd Lettuces.

I ſhould have obſerved, that when you ſow or plant out Lettuces in the Winter or Spring, it ought to be on Ridges or Hills, under ſome warm

warm Southern Wall; but if for Summer, in ſhallow Trenches, almoſt as you do for Celery; which Rules, if well obſerved, in all or moſt other parts of Gardening, would be of great Uſe; the one to throw off all ſuperfluous Moiſture, and the other to retain it. Burnt Clay, Sea-Sand, or Coal Aſhes, do alſo well, if mixed amongſt large Lettuces in the Winter, to preſerve them from Froſts and Vermin.

Of RADISHES, there are three Kinds in Summer Uſe, the *Sandwich*, or common Radiſh, of which little need be ſaid; the ſhort Topt or *London* Radiſh being the more valuable; and the *Batavia* or Turnep Radiſh, the Seed of which we have from *Holland*, is the beſt and moſt valuable.

This laſt is very good, both to eat raw, and in Soups, as you do ſmall Turneps, if the Gardener be watchful, and does not ſuffer them to grow too large and ſticky; it is pity it is ſo often miſtook, or rather mix'd with the white *Spaniſh*, which is not ſo good: It may be ſown once in ten or fifteen Days, but the chief time of ſowing it is *February*, or *March*, and if in Summer, they ought to be ſown on a North Wall in the Shade; how they will do when ſown at *Michaelmas* amongſt Carrots, Onions, *&c.* I cannot ſay.

CHAP.

CHAP. II.

Of the LUCERNE, St FOYNE, REYGRE, CLOVER, TREFOIL *or* NONSUCH, *and other Seeds for the Improvement of Land.*

THE LUCERNE is a Graſs, about which People differ in their Opinions; ſome affirming that it loves a poor Land, others a rich, and a third, that it will not do in *England* at all, nor is it worth our ſowing.

If we conſult Modern Authors, eſpecially *Mortimer*, we ſhall find that they are almoſt ſilent as to the *Lucerne:* It was a Graſs little known to thoſe who firſt introduc'd the Art of Huſbandry into *England.* Mr *Turner*, in his printed Account of Graſs Seeds, ſays of it, that it is an excellent Fodder, and, by ſome, preferred before *Saint Foyne*, being very advantageous, on dry, or barren Ground: Some ſay it requires a moiſt and rich Soil, and others a dry one; from whence he concludes, that it has proved well in all. But Mr *Mortimer* ſeems to deſire to be excuſed from any Account at all of it, when he ſays, that the Seed coming from *France* in the War Time, had prevented it's being ſo much propagated, as otherwiſe it would have been; and therefore, that he could not find ſuch Obſervations made about it as might be expected.

To which I anſwer, that in good Ground, which will bear Crops of a greater Kind, it is not worth ſowing, there being few Gentlemen that would loſe Ground of 40*s.* an Acre, for the ſake of the beſt Graſs-Seed that grows; but I muſt own I ſuſpect, that the not growing, and even the not proſpering of this Seed, is owing

to

to the Negligence and Lazineſs of the Huſbandmen, even in poor Lands, in their not Fallowing, or Ploughing and Harrowing their Lands three or four Times, and thereby reducing it to a fine Powder; ſince this, as well as the *Saint Foyne*, and other Graſs-Seeds, ſeems to affect the beſt Preparations you can make for them, I mean, as to the Fineneſs of the Ground, although it be poor.

I ſhall paſs by the Account, publiſhed by ſeveral Authors of good Repute, relating to the Etymology and Derivation of this uſeful Plant, and of the Countries which ſeem to claim it as a Plant of their own; of this the *Spaniards*, as well as *French*, ſeem to glory. It is certainly the Medic Fodder of the Ancients, being carried by the *Greeks*, after the Wars with *Darius*, into *Greece*, where they gave it the Name of the Country from whence they brought it; but has it's Name from *Lucerne*, or *Luzerne*, one of the Cantons of *Switzerland*.

The Ground they chuſe to ſow it upon in *France*, as I find it in Monſieur *Pomet*'s Hiſtory of Drugs and curious Plants brought into that Kingdom, is a ſandy ſpringy Land, or ſuch whereon the Water may be carried, as on Water-Meadows. And I have been told by a very curious Gentleman, that at, or about, Port *Mahon*, in the Iſland of *Minorca*, there is but one Farmer, of any Account, who ſows the *Lucerne* to cut green, for the feeding of his Cattle, eſpecially Cows and Horſe, that his Ground is ſandy, and that having the Opportunity of floating his *Lucerne* as ſoon as it is cut, it will be fit to mow again in fourteen or fifteen Days time; and that conſequently he divides the Ground, he ſows with the *Lucerne* into fourteen of fifteen Parts, which he cuts in their proper Order; which Ac-

count

count ſeems to agree with what the *French* and other Authors ſay upon this Head.

This alſo points out the Uſes to be made of this Plant, (*viz.*) to cut green to give to Horſes and Cows, the laſt of which will give a good deal of Milk thereby, and this perhaps is a better way than to make it into Hay; but Cattle muſt not be ſuffered to go into it to feed becauſe it is ſurfeiting; on which Account it is beſt either to cut it and give it to your Cattle in Cribbs or Racks, or to ſet Hurdles a croſs a ſmall part of it at a time in the Field, as is uſed in Turneps and other Fields, and when it is made into Hay, it is a good way to mix an equal quantity of common Meadow Hay, or Oat or Barley Straw with it, and when ſparingly uſed, it is allowed, by all that have ſeen or us'd it, to be a moſt excellent Fodder to fatten poor Cattle, or cure thoſe which are ſick, either green or in the Hay, which in hot Countries may well be mown five or ſix times in a Year, and with us two or three times.

It is certainly beſt to ſow *Lucerne* on ſandy Land, if there is no Water, the Moiſtneſs of our Summers will be equivalent to it; but in Countries ſo hot as *Sicily*, *France*, or *Spain*, there is an abſolute Neceſſity for ſuch Refreſhments.

The Rules for ſowing it, either earlier or later, as before preſcribed, hold good, for the Reaſons there alledged; but whether the ſowing Peat-Aſhes, Sea Land, or Malt-Duſt be right, I cannot well tell; a very ingenious Friend of mine ſeems to diſtruſt it: The ſame Gentleman ſays, that in good Ground, the Weeds are apt to grow up with it and confound it; ſo that he adviſes the ſowing it in Drills, by which means the Weeds may be the eaſier cut up with the Hoe in earthing it up.

A Phyſician of *Suſſex* tells me, that in order to prepare and bring his Ground into a proper Tillage, he ſowed it the Year before with Buck-Wheat, which he plowed in towards the latter End of the Year, and the next Spring ſow'd it with *Lucerne*, and had prodigious Succeſs; and the ſame might be done with Turneps, Vetches, or Tills, which are great Meliorators and Enrichers of poor Land.

Clayey Land will not anſwer any Gentleman's Purpoſe to ſow it with *Lucerne*; and I am well informed from Mr *Ray*, and ſome curious Gentlemen in *Wilts* and *Dorſet*, who have try'd it very much, that it will not do well in their chalky, ſtoney Ground; ſo that good red, or ſandy Land, of any Kind, ſeems to be the moſt proper for it, the firſt perhaps is too good, but of the laſt there is enough in many Parts of *England*.

It is a Seed that ought to be covered thin, nor need you plow the Ground above ten Inches deep. Tho' by the Length and Strength of the Root, which is large, and runs downward with a Tap-Root, as the Oak does, it requires as deep, or a deeper Soil than any other Graſs-Seeds, and notwithſtanding it be upon a Clay or a Rock, yet if there is a good Depth of natural Mould (ſuppoſing two or three Foot) it will proſper very well.

Ten or twelve Pounds will be ſufficient for an Acre, if good Ground; but 14, 15, or 16, in poor Ground.

If you ſow for a Continuance, deep Soils, tho' poor, ſay ſome, are the beſt, or if you ſow to kill the Weeds; but if you ſow only for a preſent Advantage, any Land, tho' ever ſo ſhallow will do, and the Improvement is as great as you can wiſh for, exceeding whatever you can expect

pect from Vetches or Tares, when they are plowed.

I find that Gentlemen differ in their Accounts whether it is beſt to ſow it alone, or with, or after their Corn; becauſe, ſay ſome, (eſpecially in a wet Spring) the Graſs-Seeds will ſpring up ſo faſt as to choak the Corn.. To this I anſwer that by the Directions before given, you are not to ſow above two Thirds of the Crop of Corn you uſed otherwiſe do; for Inſtance, inſtead of three Buſhels, or three Buſhels and an half of Barley, which uſed to be allowed in good, or four Buſhels and an half, or five, which uſed to be ſown in bad Ground, only two parts in three is to be ſown.

So likewiſe, if you lay your Graſs-Seeds down with Oats, inſtead of ſix or ſeven Buſhels to be allowed in poor, or four or five in rich Land, only four or five muſt be allowed in the firſt, and three an a half or four in the laſt; to this I likewiſe add, that the Graſs-Seeds, let them be which you will, muſt be ſown as late as you can; that is, if you ſow the Barley or Oats the latter End of *March*, or Beginning of *April*, the Graſs-Seeds ſhould not be ſown till the Beginning or Middle of *May*; in ſhort, when the Barley or Oats has gotten good Root, but not burniſh'd or ſpreading all over the Ground, then you may ſow your Graſs-Seed, and Buſh-harrow it over.

The timorous will perhaps be afraid that ſuch harrowing will hurt the Corn; but that is a great Miſtake, ſince nothing diſpoſes Corn and all other Vegetables, in a Garden or elſewhere, more proper to make Corn bear well, than that Diſlocation which is near a-kin to Tranſplantation; for there are ſome, that in ſtrong Lands draw great tin'd Harrows over their Corn in *January* or *February*, by way of Tranſplantation. But

to proceed, as the Horſe which draws the Buſh-Harrow may be booted, as he is when you roll a Bowling-Green, it will prevent the Footſteps of the Horſe ſpoiling the Corn.

The Reader has been already told, that the *Lucerne* will proſper beſt on moiſt deep Sands, and ſuch as may be overflown; an inſtance of which confirms what ſeveral Authors have wrote on this Subject, which is what a Gentleman, near *Stratford-Bridge* in *Hampſhire* affirms, who having a Field of Oats, among which he ſowed his *Lucerne*, which was for the moſt part covered over by a large Flood, and in ſuch a Manner, that the Oats, by the long ſtanding of the Water were quite deſtroyed, yet the *Lucerne* was left alive, and proſpered better there than on the higher part of the Field where the Water did not reach; thus pointing out to Mankind that it is a Water Plant, gives a hint of it's thriving well in the Fenny, and overflown Parts of *Lincoln* and *Cambridgeſhire*, where from the ſeveral concurring Circumſtances of a deep, rich watery Soil, it may reaſonably be ſuppoſed it will thrive extreamly well.

The ſame Gentleman adds, that all the while he is poſſeſt of his *Lucerne*, either in Graſs or Hay; he never gives his Coach-Horſes, which do his Huſbandry Work, any Corn at all; that it tucks up their Bellies, and does not blow them up as Clover does.

The *Lucerne* may, with great Advantage, be ſown on the ſandy Lands, which have a rich marly Bottom, as in *Lancaſhire* and *Cheſhire*, which Sands are not of their own Accord apt to turn to green Sward, becauſe the Roots will ſtrike into the Marle, and take much ſtronger Root than when they grow on poorer Land.

Some

Some of the former Editions of this Book intimate, that the *Lucerne* will deſtroy all Weeds; whereas in the laſt it is inſerted, that Weeds will deſtroy it: But this is ſpoke in Relation to it's different Ages and Growth, when *Lucerne* is young, and in Seed-Leaves, the Weeds, eſpecially in rich Lands, are like to get the better of it, and ſhould for that Reaſon be ſown in Drills: But when the *Lucerne* has got the better of Weeds, it will deſtroy whatever grows near it.

The well experienced Improvement of TREFOIL, otherwiſe called *Nonſuch*, and by ſome, *Hop-Clover*, or *Fine-Clover*, (to uſe the Words of an eminent Dealer this Way) is, That it is a certain Rule, that all Lands, naturally kind for Corn, and unkind for Graſs, are undoubtedly kind for *Trefoil*; and tho' it be ſo much impoveriſh'd by long ſowing, that it will bear Corn no longer; yet ſuch Land, being ſown with *Trefoil*, will become worth 20 *s.* or 30 *s.* an Acre. As for the Soil in which it will grow, he tells us, (and ſo does Experience too) that even clayey, ſtiff Ground, and eſpecially chalky, rocky, and hilly Land, of a very ſmall Value, may be improved by it. But if the Land be a Clay, then it muſt be laid as dry as you poſſibly can. The Paſture of *Trefoil* is much better than any for Cattle, eſpecially Cows; cauſing them to give more Milk in Quantity, and better in Quality, than other Graſſes; and likewiſe makes Butter and Cheeſe of a delicate yellow Colour; the Hay thereof is nouriſhing, and will make Oxen, or other Cattle, as fat as any other Hay, if it be mow'd and made in it's proper Seaſon, whilſt it is full of yellow Bloſſoms, and not over dry, (for 'tis ſoon made) it does not loſe its Colour, nor ſhrink in the making, as Clover-Graſs doth, but is much finer, greener, and, in all Points,

Points better for Cattle; and is very good for fattening of Ewes and Lambs, and doth not breed Rottenneſs, which other Paſtures are apt to do: And whereas Clover-Graſs doth daily make ſick, and kill many Cattle, this is free from any ſuch Danger; and Cattle are ſo ſenſible of it, that they will not willingly feed on Clover, till they have eat the *Trefoil* to the very Earth, as may be ſoon ſeen, if one half of the Field be ſown with one, and the other with a other; therefore if you are reſolved to ſow Clover, the ſafeſt way is to mix one half of *Trefoil* with it. In compariſon to Clover, *Trefoil* will endure much the longeſt, if it ſtand not to Seed; for that is deſtructive to the Root, and the Sap is gone which ſhould nouriſh it, (becauſe it muſt not be cut late, and in the Heat of Summer) always provided the Ground be ſown with clean Seeds, and ſeparated from the Huſks wherein it grows; for if it be not, it will be impoſſible to cleanſe it from the coarſe and ſouer Graſs, which mixes amongſt it, and is ſo deſtructive to the *Trefoil*, that it will not laſt half ſo long; for as the coarſe Graſs increaſes every Year, ſo the other will every Year decreaſe. The next Year after the Crop of Corn is taken of, you may paſture or mow it, which you pleaſe; but if it ſtands till the Seed is ripe, the Hay is ſpoiled, and the Cattle will not eat it.

The Time and Manner of ſowing it, is when you ſow Oats or Barley, which ſhould be done after the following Manner; the Ground being ſown and harrowed in with Corn, ſow the *Trefoil* Seed, and harrow it once in a Place, and then roll it, the Seaſon being good, and the Weather kind. The proper Time of ſowing, is from the Middle of *March* to the latter End of *April*.

An

An Acre requires 12 Pound, unleſs the Ground be very rough.

The only Soil improper for this Graſs is barren, ſandy Land, that will not bear Corn, and ſpringy Ground; though I muſt confeſs, I have ſeen them grow on both theſe Soils; but not ſo well as on chalky Hills, Stone-Braſh, *&c.* There is a ſort of Land, *viz.* a barren, blackiſh Sand, or Hazle-Mold, which is naturally kind for Corn, but being ſown ſome Years, is inclined to a Couch-Graſs, which is as deſtructive to it, as the other before mentioned is to *Trefoil*, they being of a Quality much alike. Where the Land is ſubject to this Graſs, (as moſt light Hazle-Molds, *&c.* are) the beſt way is to plough it three Times before it is ſown; which will not only deſtroy the Couch-Graſs, but all other Weeds, if it be mow'd; and being plow'd again, before the *Trefoil* is decayed, and other Graſſes take place, it will bear far better Corn than before; and afterwards will bear *Trefoil* full as well.

This is one of the beſt Seeds to lay down your Fields with, where the Soil is proper for it, ſix Pounds being mixed with one Buſhel of Rye-Graſs, or, which is better on all light Lands, the fineſt Seed, well clean'd, of the common Upland Meadow-Hay well choſe, and ſuch as is to be found in the Hay Lofts of Gentlemen's Stables, who keep fine Running-Horſes, or Hunters. This ſowing of *Trefoil*, or *fine Clover*, with Rye-Graſs, or Upland Meadow-Graſs, is much uſed in ſome Parts of *Hampſhire* and *Wiltſhire*, in ſtony, ſtubborn Land, on which, tho' Corn grows well, few Graſs-Seeds will.

If makes an excellent Fodder, if cut ſoon enough, that is, before it grows benty and dry, on account of which they have a general Rule to

cut

cut it before *Midſummer*; and I have ſeen two Ton and a half, or three Ton of Rye-Graſs, and fine Clover mixt together, in Ground that would carry neither *Lucerne*, nor broad Clover, tho' in the Neighbourhood of it there has been indifferent good *French* Graſs.

It is ſown in the Spring with Barley or Oats, which Method is alſo very proper for the ſowing of Garden-Walks, becauſe it comes up and buriſhes quickly, and mows eaſy, and is ſo complaiſant a Plant, as to give place to the Graſs, as ſoon as that gets ſome head, tho' a ſmall Quantity will ſtill remain. All theſe kind of Graſſes, will grow exceeding fine (as will all manner of Turf-Graſs Walks that are decaying) by ſifting of Wood-Aſhes very thinly over them. And thus much for fine *Trefoil*, *Hop*, or *Fine Clover*.

Having in ſome other Places recommended the ſowing even of *St Foyne*, *Broad-Clover*, &c. on Wheat Lands, as well as on thoſe ſown with Barley or Oats, according to the Nature of the Ground on which thoſe Grains are ſown, I cannot but recommend the ſowing of fine *Trefoil*, mixt with ſome Broad-Clover, on rich moiſt Land, or with Rye-graſs, on thoſe which are ſpewy, amongſt Horſe-Beans, which will, when the Beards are taken away, make very good Herbage; and tho' it is to be plowed again the next Year, ſuch Plowing in will be an Improvement the Year following, I wiſh I could ſay the ſame as to Peaſe Lands; but they lying flat, will, I doubt, ſpoil the Graſs: In ſuch a caſe, one or two Fluids of Seed is ſufficient for an Acre, *viz.* 4 or 5 of *Trefoil*, and 3 or 4 of Broad-clover, and half a Buſhel or three Pecks of Rye-Graſs.

Notwithſtanding what has been before ſaid againſt *Clover*, in compariſon of *Trefoil*, it is a very excellent and uſeful Graſs, but requires a tole-

tolerable good Land, and proſpers beſt in that which is rich, and light withal, where it will be a high Improvement, though the Ground were good and profitable before. It will alſo proſper and thrive on any Corn-Land well manur'd and ſoiled, tho' it be a chalky Bottom, and a Soil which is of a clayey Nature, as a great Part of the Counties of *Hants* and *Wilts* are; and it is obſerved, that Land which is too rich for Corn, cannot be ſo for *Clover*, but very poor Lands are not fit for it, unleſs burnt or denſhir'd, as moſt of the Down-Ground in the *Weſt* Country is, and then the laying it down with *Clover* is a very excellent Way.

The Quantity of Seed for an Acre, ſown alone, is generally ten or twelve Pound; but if you ſow it with Corn, then four or five Pounds is ſufficient; if you ſow more, and the Spring proves to be wet, then the *Clover* will get a head ſo much, as to ſpoil the Corn; on which Account ſome do not ſow the *Clover* Seed till the Corn is juſt coming up, and ſo harrow it with a Buſh-Harrow.

The general way of ſowing *Clover* for many Years has been either alone, or on Fields where Oats or Barley have been lately ſown, and is juſt come up; about the Beginning or Middle of *April*, or rather at ſuch Time as the ſaid Grains, or either of them, have got pretty well rooted: But there is yet another Method of ſowing of *Clover*, which I have ſeen practiſed about *Brumpton*, and other Parts of *Eſſex* and *Hertfordſhire*, on their Wheat Lands; ſometime after ſowing, on Barley and Oat Lands, and this ſowing being performed eight or ten Days before *Michaelmas*, the *Clover* will be ſo well rooted as to bear the Winter, and come ſtrong next Year, tho' there are others, who for fear of hard Froſts,

defer ſowing their *Clover* on theſe Lands till towards the Spring, when their Wheat Lands are fed ſhort by Sheep, Lambs, *&c.* then they ſow about eight Pounds to an Acre, and juſt roll it in only, tho' in rank Ground a Buſh-Harrow would do no hurt.

The Uſes of *Clover* are ſo many, and ſo well known, that I need not repeat them; but there is one in particular, that I think ought not to be omitted, and that is the Method they uſe in *Herefordſhire*, part of *Glouceſterſhire*, and *Wales*, where they let their young Shoots or Pigs run and graze; which cauſes the Shoots to grow longer and larger, and is the chief Magazine from whence all thoſe Stores are brought, wherewith all, or moſt of the *Weſt* Country Markets, as well as thoſe at *Smithfield*, and other Parts of *London*, are ſtock'd.

Another great Uſe of *Clover*, is when a Man intends to improve his Land, without taking any Benefit by Hay, which is to ſow ſome Land, which is moderately poor with this Seed, with a View of plowing the *Clover* in, and ſowing it with Peaſe, Wheat, or any other Grain. In ſuch a Caſe, you ſhould allow fifteen or ſixteen Pounds of Seed to an Acre; and as the Ground (though poor) is ſuppoſed to be in good Tillage, you may plow it about the Beginning of *Auguſt*, juſt before it comes to Seed; and this is as good or better than any Dunging; beſides which, you may turn in ſome fattening Cattle to eat the Head of it.

I ſhall finiſh this Account of *Clover*, with a Story, which is very remarkable. An honeſt Country Clergyman ſome Years ſince, who had a good deal of Glebe Lands in his Pariſh Fields, called his Pariſhioners together, and invited them into the Project of ſowing four or five Pounds of

Clover

Clover, in every Acre of Barley or Oats that Year, (tho' now they ſow ſix, ſeven, or eight, according to the Poverty or Richneſs of the Soil) in order to have ſome *Clover* in their Fields that Autumn, and next Year, when it was to lie unſown, for the feeding their Sheep; which his Pariſhioners, being unwilling to do what neither their Fathers or Fore-fathers had ever done before them, refuſed; on which Account he was obliged to ſow his own Ground by himſelf; the Effect whereof was, that all the Sheep fed no where but upon his Glebe, and ſo by conſequence improved it by ſo much more, than that which belonged to his Neighbours; that they were obliged to come into the ſame Meaſures the next Year whether they would or no.

Rye-Grass, a kind of Food, which when young, in the Spring, is proper for the fattening of Horſes, or large Beaſts, is of very great Advantage for Milch Cows, in that it cauſes abundance of Milk, making excellent Butter and Cheeſe, and is of great Service for Ewes and Lambs, or to feed any larger Cattle in thoſe early Seaſons of the Year, eſpecially if the Spring be warm, and the Wet does not lie too long, and before *Clover*, and other Graſſes come in, it being more quick than they; for in hot Weather, ſuch as the Months of *June*, *July* and *Auguſt*, it grows harſh and dry, and is fit for nothing.

Clayey, and other ſour and uncultivated Lands, are proper for it; nor does it take up ſo much Tillage as other Graſs-ſeeds, growing well amongſt the moſt ſtubborn Clods that lie in the way; on which Account, where any Gentleman has any cold Land, it can't be better employed, it being obſervable, that thoſe Lands which are not fit for *Clover*, *St Foyne*, *Trefoil*, or any other

Graſs-ſeeds, may be much improv'd by *Rye-Graſs*: It will laſt ſome Years, and what is of great Moment, the feeding of Cattle is of great Advantage to it, becauſe it will in the Spring ſuſtain double the Quantity of other Lands; but it is of no manner of Service in the Autumn, except it be a very drippy one, or for Hay.

The Hay is very ſweet, and by ſome accounted better than that which grows in Meadows, eſpecially if mowed while green and tender; it ought to be hained the latter End of *March*, or the Beginning of *April*, if you intend it for Hay; but be ſure you take all the Advantage you can of the Spring it makes in *February* and *March*, which is of more Advantage for the feeding of Ewes and Lambs, or Milch Cattle, when there is no other Graſs than the Hay itſelf.

There are two Seaſons of ſowing, which vary according to the Uſes to which you put your Ground; if you ſow Wheat, and the Nature of your Soil be ſo wet and cold, that it will not make any Sward, you are to throw in about three Pecks, or one Buſhel to an Acre amongſt your Grain, ſowing it upon the Furrow after your Corn is harrowed in, and give it a harrowing, with the back of a Harrow, or of one made of Buſhes tied to it.

If you deſire to renovate and improve it, when in Decay, it can't be better done than by ſpreading of Street or Pond Dirt, and Lime mixed together or ſeparate; the Nature of it requiring that the Compoſition which is ſpread over it be enriching and ſtrong.

Being ſown in Autumn, it will be fit to graze the next Year with Horſes, and other black Cattle, when it may be fed as cloſe as poſſible; but the great Value of it, is its coming ſo early in the Spring, *viz.* in *March*, *April*, and *May*, for the

the Uſe of all Sorts of Cattle, who are then greedy of any Thing which eats tender; and ſuch is the Advantage of it, that you may feed it ſooner in the Spring, than you can do any other Graſs, without danger of making it bleed.

Upon the whole, tho' Rye-graſs is an Herb proper to be ſown upon cold, coarſe, ſpewy, auſtere Ground, yet I have been often ſorry to ſee it admitted into Lands, which are warmer, and conſequently of too great a Value for it; for whoever would lay down any Land that is tolerably good, cannot do it better than with the common Hay-Seed, which comes from the fineſt up-land Meadow-Land, and a proportionable Quantity of *Trefoil*, or *Nonſuch*, mixed with it, of which much has been ſaid already, under the Head of *Trefoil*.

If this Seed be ſown on Land entirely devoted to it, and on which, in all Probability, no Corn, or very little will grow, then two Buſhels is the leaſt that can be ſown.

This Graſs, if it be ſown by itſelf, or with Corn, and ſuffered to be hained and cut for Hay, muſt be cut before *Midſummer*, as was directed in the Article of fine *Trefoil* or *Nonſuch* mixt.

St Foyne, or *French-Graſs* chiefly affects ſuch Land as has underneath it, at about ſix or eight Inches, or a Foot deep, a rocky, ſhelly Ground, either of Stone or Chalk, wherein the Roots may run down and expatiate themſelves with Pleaſure; for in rich Lands, or in hard Gravels, where there are no ſuch Rocks, the Roots have not room to run down, and it will either be burnt away, or the Weeds will deſtroy it. 'Tis on theſe Lands it proſpers beſt; the Roots being very long, and running ſo deep, that they are not ſo ſoon dry'd up by the parching Heat of the

the Sun, as all other Graſſes are; and this is the Reaſon, why in the hotteſt Summers we have *St Foyne* that will look green and flouriſhing, whilſt other Graſſes, as *Trefoil*, *Clover*, and *Rye-Graſs* in particular, are in a Manner burnt up; this we have from Experience in the ſeveral Counties of *Oxford*, *Glouceſter*, *Hants*, *Wilts*, and *Dorſet*, where this uſeful Graſs is raiſing in great Abundance, on Lands of different Contextures, and different Bottoms of ſhelly Rock, Chalk, *&c.*

It muſt (ſays a judicious Seedſman) be ſown in great Quantities, becauſe the Seed is large and light, either with Barley or Oats, the Ground being made extreamly fine, by plowing of it two or three Times, and harrowing it with the large tin'd Harrow as oft; for in this Preparation it is, next the goodneſs of the Seed, that the Succeſs of this, and I may add moſt other Graſs-Seeds, conſiſts: But you muſt not ſow your Corn too thick, *viz.* not above two Thirds of what you would otherwiſe allow; ſome ſay, that you need not fear ſowing theſe Seeds too thick, for being ſo, they ſooner ſtock the Ground, and deſtroy all other Graſſes and Weeds. Mr *Turner* ſays, that the Quantity of *St Foyne* is four Buſhels to an Acre; but I am told by a Gentleman in *Dorſet-ſhire*, who has a good deal of it, that on their poor Lands they allow ſix or ſeven Buſhels; the pooper their Ground is, I ſuppoſe, the more Seed they allow, there being on the Top of many rocky, chalky Grounds, different Degrees of Soils, as there are on gravelly and other Bottoms.

The general Method of ſowing *St Foyne*, on Lands which are proper for it, has been either by itſelf, or with, or rather after, Barley, Oats, *&c.* but of late Years (which is, I conceive,

ceive, one of the neweſt and beſt Pieces of Huſbandry in Mr *Liveing*'s Syſtem) they ſow this Seed after Wheat, by which means there is no time loſt in the Improvement of your Land; and on the chalky Lands about *Maidſtone* in *Kent*, where it has been ſown (as I am informed by a Noble Lord who lives in that Neighbourhood) a great while, it endures the ſevereſt Winters very well, tho' there are ſome who defer the ſowing of this Seed, as well as *Clover*, till Spring, for the Reaſons mentioned in the Article of *Clover*.

I have not as yet met with any Experiments, which have been made to puſh the *St Foyne* on, whilſt it is as yet young and tender, and juſt as it is coming up, but undoubtedly on all Lands that are very barren, ſuch Aſſiſtances muſt have a conſiderable Effect. If therefore, the Place you live in affords you either Sea-Sand, or Malt Duſt, Aſhes made of Peat, Wood, Straw, Furze, or Bracain, or any other calcin'd Material, if duly and carefully applied, and not in too great Quantities, I believe you need not fear Succeſs.

But this I ſay, not from Experience, but Conjecture; for ſome ingenious Gentlemen are of another Opinion, and think that the ſowing of any of thoſe calcin'd Aſhes will deſtroy rather than forward thoſe Seeds, eſpecially whilſt they are young.

This nevertheleſs does not entirely deter me from that way of thinking. I am ſure, in all Sorts of Corn-Land they are exceeding good, and except it be Peat-Aſhes, a ſmall Quantity may be uſed, even on the tendereſt Graſſes; however, it will be of great Service to it when growing old, as the next Page explains.

The greateſt Care that is to be taken, is the not feeding this and other Graſſes at all the firſt

Year,

Year, nor very early in the Spring the ſecond, becauſe it will be apt to bleed itſelf to Death; for the Sweetneſs thereof is ſuch, that it will provoke the Cattle to bite it too near the Ground.

And the Noble Lord, whom I have juſt now mentioned, very much decries the letting in great Flocks of Sheep to feed on it at any Time; becauſe, he ſays, that they not only bite too cloſe, but alſo taint the Graſs in ſuch a Manner as to weaken and deſtroy it; and this his Lordſhip obſerves to be an Error much committed in the *Weſt* of *England*; when you would therefore feed ſuch Lands where *St Foyne* is ſown, both on Account of your Cattle, as well as the long laſting and Succeſs of Graſs-Seed, but a few Cattle ſhould be put in at a Time, and thoſe prevented from running all over and tainting your Graſs, eſpecially in the Spring.

It will laſt fifteen or twenty Years very well; but when it comes to be old, *i. e.* paſt ten or twelve Years, or ſometimes ſooner, you muſt now and then, once in three or four Years, lay a new dunging in the Winter, or in the Spring ſow ſome of the Aſhes I ſhall next give an Account of, to give it new Life and Vigour.

Having in ſeveral Parts of this Account of the Improvements of Land by Graſs-Seed of divers Kinds, made mention of Aſhes and Earths to ſow or ſpread over what Fields you have of that Kind, that I may make it the more compleat, I have drawn up what follows:

For *Nonſuch* or *Trefoil*, about ten or twelve Buſhels of Wood or Kiln-Aſhes, ſown by Hand out of a Seedlip. But if you want to help it after it has been ſown ſome Years, fifteen or ſixteen Buſhels is the leaſt you can uſe.

Rye-graſs ſeldom wants any Aſſiſtance till after it has been ſown a year or two; but when it does,

does, you may allow twenty or thirty Load of the Shovellings of Streets, or Earth dug out of the Highways, and mix'd with ten or fifteen Load of Dung, and five or ſix of Sea-Sand, Lime, or Coal-Aſhes; and this is indeed a ſolid Improvement for any of the Graſſes before mentioned. To this may be added, three or four Load of Pigeon's Dung, tho' ſome there are that uſe that Dung by itſelf; but it is in my Opinion too fiery to uſe alone; beſides, it is a very difficult Matter to get Quantities enough of it, to improve the many Acres of Graſs which are now ſown.

In *Berkſhire* they have an Improvement, uſed juſt as the Seed is coming up, which is made of the Peat that is dug out of low moraſſy Ground and burnt, the Aſhes of which, they ſay, contain a great deal of Salt, and is of a wonderful fertilizing Nature: They allow fourteen Buſhels to an Acre, and ſow it by hand out of the Seedlip, and obſerve it does well on Peaſe; but as for other Grain, they ſay, it does Injury, by cauſing the ſame to run too much to Haulm. But as this may be a Fault owing to the Quantity rather than Quality of the Aſhes, I cannot ſee why a more moderate Uſe of it may not be well, in any Improvements of this Kind.

The Uſe of Lime, Sea-Sand, Rags, Shells, *&c* are ſo well known, as not to need any Explanation.

The laſt Account I ſhall give, (which is, I think, the cheapeſt and eaſieſt to be come at) is an Improvement made by the burning of Clay; the firſt Experiment of which was made, by the preſent Right Honourable Earl of *Hallifax*, and is much practiſed in *Suſſex*; from ſome Gentlemen of which County I have had the greateſt part of the follow Account.

The reddeſt ſtrongeſt Clays are the beſt for that Purpoſe, and contain in them very great Quantities of Salts when calcin'd and burnt; and in the doing this (if I may uſe ſo mean an Expreſſion) they kill two Birds with one ſtone; for in the firſt Place they dig out their Clay, (which that County much abounds in) to make their Fiſh-Ponds; and in the ſecond Place, they burn their Clay to Aſhes; which is the Improvement I am here ſpeaking of, and their Method of burning it, is as follows.

This burning of Clay ought to be done in the Summer time, and in the drieſt Weather, tho' it may not be improper to have the Place where your Fire is made, a little out of the Sun, that the ſuperior Force of one may not extinguiſh the other.

When you have got about ſix or eight Load of Clay cut into Spits, about as thick as a Brick, let it be pretty well dried by the Sun, and having made a Heap of Fern, Straw, Furze, ſmall Bavin-Faggots, Billets, Coal, or other Combuſtibles, laid one upon another, in a proper Order, about as big as a little Bonfire, in the Form of a Pyramid; bring the Spits of Clay, and lay them round the ſame, two or three Spits thick, leaving only room to put in the Fire, and then light the Heap. The Clay will ſoon take fire, and as it advances outwards, ſtill lay on more Spits of Clay, placing them in ſuch an Order, that the Fire may be pent up within the Heap, and never ſuffered to go out; for if you do that, your Labour will be all loſt, and you muſt begin again.

After you have burnt ſix or eight Loads of Clay, which is a little dry, the Heat which is within will be ſo great that it will fire any Thing, and then you may lay on the Clay green, as it is

dug

dug out of the Pit, being always watchful to keep an Addition of it, laying on one after another; but not too faſt neither, leaſt you ſmother the Fire, and put it out that way.

One of the greateſt Difficulties that attends this Work, ſeems to be the laying on the Spits of Clay, when the Heap begins to grow large; for they have ſometimes Heaps, as I am informed, of ſix or ſeven hundred Load in a Heap, or more, but this, I think, may be done by placing a large Tripos, Quadrupos, or any other Figure, that joins in a Pyramid with a Joint at top, and of ſuch a length, that you may enlarge and ſpread out the Feet as the Heap ſwells, having alſo Stages of Boards laid upon Brackets, on which the Men may ſtand, who place the Spits of Clay: This being done, and the Fire kept continually in, and watch'd Night and Day, you will ſoon have as large a Heap as you pleaſe; for the larger the Heap grows, the eaſier it is to burn the Clay; the Heat in the Heap labouring with all its Might to extricate itſelf (like the Vulcano's of *Ætna* or *Veſuvius*) to find Vents or Paſſages whereby it may diſgorge itſelf.

In *Suſſex* they allow about ſeven Load to an Acre of Paſture-Land; but whether it does beſt upon low Land, or that which is of a chalky, gravelly, or ſandy, or on that which is of a cloſer Contexture, I am not as yet well inform'd: but that ſhall be the Subject of a future Obſervation.

Since the writing of the above Paragraphs, I have met with ſeveral Hints from Gentlemen in *Suſſex*, where this Method of burning of Clay has been more uſed than any where; one of whom, (a Baronet of a conſiderable Figure and Genius, who was not only one of the firſt, but, as he himſelf has told me, has done more at it

than any Body in all that County) tells me, he found it had done extreamly well on his Corn-Land, being much preferable to Lime; but that he could not ſay ſuch great Things of it, as to its Effects on Meadow-Land, but that he had tried another Experiment of that Kind in Meadow-Land, which was full of Ant or Mole-Hills, which he had plowed with a Mole-Hill Plow, and had burnt the Hills to Aſhes, which he had ſpread all over his Ground, and had Crops of Graſs of five or ſix Ton on an Acre, or more, to the Amazement of every body that ſaw it, four or five Years ſucceſſively.

And this would be a good Intimation to all thoſe Gentlemen, whoſe Eſtates have been neglected, one of which I myſelf have this Year ſeen in *Dorſetſhire*, where there is Land worth 20 *s.* or 30 *s.* an Acre, now let for not above 2 *s.* 6 *d.* or 3 *s.*

I am told, that the Method that Noble Lord, who is ſaid to be the firſt Inventer of burning of Clay, uſes, is not in a Pyramid or Heap, but in a Ridge, juſt as Tanners Bark is piled up in a Coppice, when it is for Sale, keeping (as I ſuppoſe) a hollow Funnel, or Tunnel, in the middle to draw the Air. But for the real Method, take the following Account, ſaid to be taken from his Lordſhip's own Hand Writing, in a Letter ſent to a Peer of *North-Britain.*

The Method of burning CLAY.

ANY ſort of Clay will do, but the ſtronger it is the better, and the ſtronger the Ground is, the more proper for this Manure, and it is more proper for Clay than Sand, becauſe it is a very hot Thing. A Load of Turf burns five Hundred or a Thouſand Clods of Clay in one Heap. The Turf is but com-

mon

mon Dirt, dry'd and ſet on fire with Straw or Shavings. The drieſt Time in Summer is the propereſt to burn it in; whenever your Turf is ready, you lay on a Heap of Clay to cover it quite up, and it will immediately turn to Aſhes; and when the Fire is like to break out, you may lay on more Clay, and ſo on, till you have either what you want, or the Fire happens to go out, and then you muſt make a freſh Heap, and you muſt bring the Turf to the place you dig the Clay, becauſe the Violence of the Fire will ſoon ſet. You lay the Aſhes upon the Graſs-Ground, either Meadow or Paſture, about ten or twenty Loads to an Acre; the beſt Time is when the Hay is juſt led off. You take about twenty Loads to an Acre of plow'd Ground, and after it is laid on, prepare it for any Kind of Grain, you think moſt proper, or for Potatoes, Turneps, or any other Kind of Roots. It is likewiſe very proper for cold, barren, channel Ground, &c.

This is a true Copy of that Noble Lord's Letter, who was the firſt Inventor of this uſeful Improvement; but whether his Lordſhip's Inſtructions were too conciſe, or ſuch as the Perſon's, to whoſe Conduct this Affair was committed, did not underſtand, they found the Directions were deficient, and would not do; for that when the Fire was lighted and had burnt ſome time, and the Turf and Straw conſumed to Aſhes in the inſide, the Heap would tumble down, and put the Fire out, at leaſt ſmother it ſo that it would not burn; and this put them upon trying another Experiment, which anſwered their Expectation.

They erected a little Kiln of about five Foot Diameter at Bottom, and about ſix or ſeven high, drawing it towards a Pyramid, which remained about two Foot wide, the Figure where-

of

of might be, from thence called the *Fruſtum* of a Cone, or Pyramid: This Pyramid was ſet either in ordinary coarſe Mortar, (or with Bricks, with no Mortar at all in the Joints) but if in coarſe Mortar, there muſt be Holes for the Fire to break through and ſet the Materials (which are to be piled up round it) on Fire.

To render this ſmall Kiln or Pyramid the more effectual, they made ſeveral Tunnels upon the Ground, about a Foot, or a Foot and half ſquare, which correſponded with the Bottom of the broken Pyramid, and were uſed as ſo many Holes to draw in the Air, and keep the Materials, which were piled up round the Pyramid, always lighted; if by any chance (as extream Wet, or the like) the Fire ſhould go out, it might be renewed again, by putting Straw, Moſs, and other Combuſtibles down the hollow of the broken Pyramid, and thruſting the ſame up thro' the Tunnels, and by re-lighting the Fire towards the Wind, might ſet the Heap on Fire again.

I have already remarked, that in the new Improvement of this broken Pyramid, or Kiln, the Tunnels were made to run ſquare on the ſides of the broken Pyramid: But I have thought of another Invention which I think, much exceeds the former, and that is the running the Tunnels Radius ways, (*Vid. the Plate following*, *Fig.* 1.) by which means if the Fire ſhould go out it might the more eaſily be lighted, by putting in the Fire exactly at that Quarter where the Wind ſits.

The Figure (to which there is alſo a Scale put) is, upon the firſt Inſpection, demonſtrative of its Uſes; I only add, that at Top there ſhould be put three or four very large Tyles, or Slabs of flat Stone, looſe, croſs ways to depreſs or keep down the Heat, and leave room for the Smoke to evaporate; theſe large Tyles or Slabs of flat

Stone,

Stone, ſhould be looſe that you may take them off, upon any occaſion when you renew your Fire, by putting in Straw, Moſs, Stubble, *&c.* and then laid on again.

The Structure of your Kiln being made, and the Uſes of it well underſtood, we come now to the piling up and diſpoſal of the Clay which you are to burn, which, as has been elſewhere hinted, ſhould have been laid a drying ſome time before; and having filled the hollow broken Pyramid with Straw, Moſs, Stubble, ſmall Faggot-Wood, and the like, and having alſo ſtufft all the Tunnels leading to the Bottom of that Pyramid full of Combuſtibles of the like Nature, but not too hard, you are then to begin piling up your Clay and other Materials, which are to be burnt in the following Manner: Let the firſt Layer next the broken Pyramid be Straw, Stubble, Fern, and Furze, either ſeparate or mixt together, ſet round if you pleaſe, with ſmall Baviny-Wood, made of Brambles, Black or White-Thorn, or whatever ſmall looſe Stuff you can get, and on that begin your firſt Laying of Turf, dug up in thin Spits, like Brick, and prepared as before ſet down; then lay another Row of the ſame Combuſtibles as before mentioned, and another Layer of Turf thicker than the former, and then the Fire may be put to, and new Layers of Clay put on as the Fire advances; the chief difficulty is the coming at the Heap to lay on the Materials as the Heap increaſes, which is remedied by a Tripos, the Legs whereof ſhould be about ten Foot long, and faſtened at Top by a Pin, which Tripos may be expanded as the the Heap grows wider at Bottom.

The Pyramid and Tunnels are either made of Brick or Stone, without any Mortar at all, or at leaſt that there ſhould be a great many Openings

or

or Joints left, thro' which the Aſhes may fall, that would otherwiſe increaſe ſo much as to ſuffocate and ſmother the Fire; the Perſons who attend it, called Stokers, ſhould be provided with Rakes or Scrapers, ſuch as Bakers or Brewers uſe when they draw their Aſhes out, and clean their Ovens and under their Furnaces, with which Rake or Scraper the Aſhes may be pulled out and the Tunnels kept open, ſo that the Air may have its free Force, and keep the Fire always alive; and by this means the Heap alſo will not grow ſo very wide, as to be troubleſome to thoſe that pile on new Layers of Clay.

I ſhould alſo have noted, that between every Layer of Clay there may be ſome few of the Materials, I have before recounted, put on. Every Body that is acquainted with Huſbandry knows the Advantage there is in all Aſhes that come from Malt and other Kilns on Meadow and Corn-Land, when ſpread on by itſelf, but when mixt with theſe Clay-Aſhes, what may not the induſtrious Farmer expect.

Before you begin burning, you are to go not only into the Field, and collect all the Stubble you can; but you are to go into the Common, and collect what Fern, Furze, or other Combuſtibles are to be met with; and alſo into the Woods, where you may ſcrape up large Quantities of long Graſs, Moſs, and the like, which will ſet and keep the Clay on Fire, and be an excellent profitable Manure when mixt with theſe; the laſt of which is, when burnt, one of the beſt Improvements on Graſs and Corn-Lands, that is now uſed in Huſbandry.

The Succeſs this Improvement has met with, in Countries where it has been ſome Time uſed, will, 'tis hoped, prevail and get the better of all the Prejudices which have been entertained againſt

gainſt it, and makes it one of the moſt uſeful, as well as the cheapeſt of all Improvements. An ordinary Load of Lime, of four Quarters or Thirty two Buſhels, will coſt at leaſt Twelve or Thirteen Shillings; but as the Expence of this conſiſts only in Attendance, I cannot ſee how a Load can coſt above One, but if it ſhould be two or three Shillings, it muſt certainly pay very well, ſince it is, by all Gentlemen who have tried it, allowed to be much better than Lime.

Fronting the end

Fig: 2

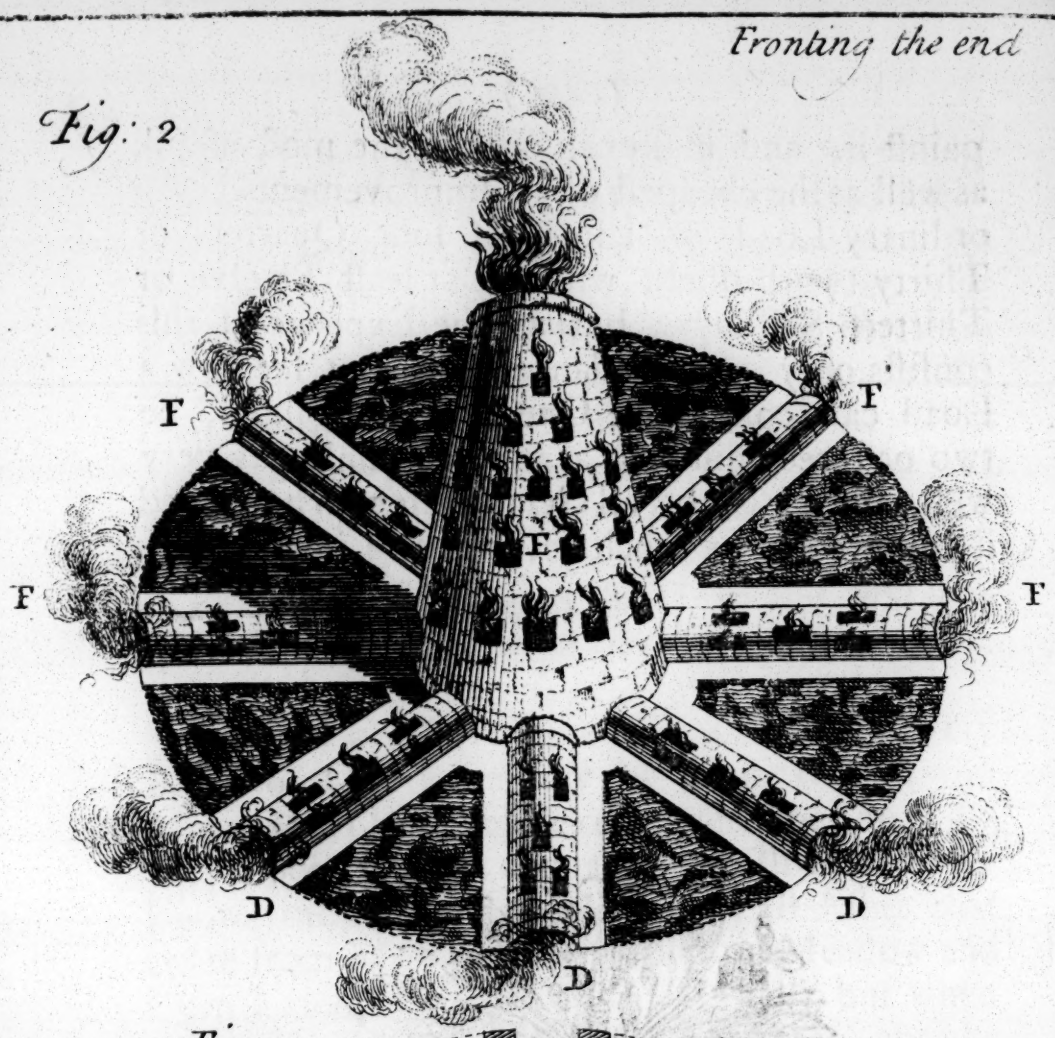
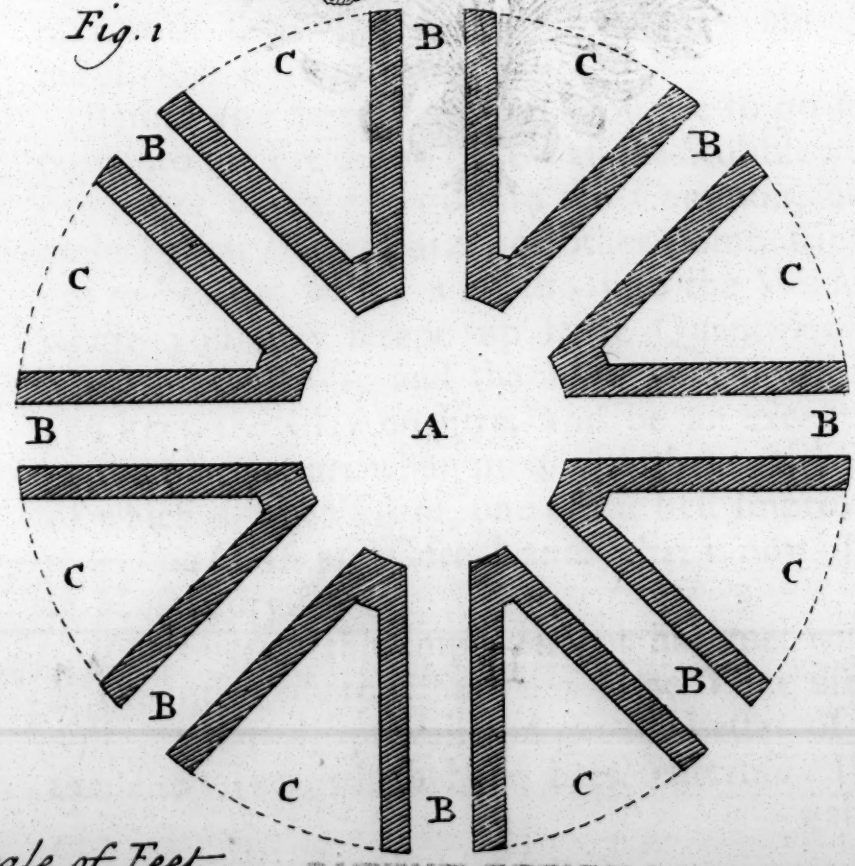
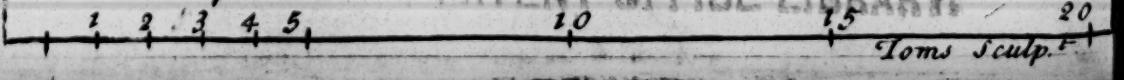


Fig. 1



A Scale of Feet



Toms Sculp.

An EXPLANATION of the References to the Plan and View of the new-invented Kiln for *burning of Clay*.

A *The Hollow of the broken Pyramid, or Kiln.*

BBBBBBBB *Eight Tunnels leading into it.*

CCCCCCCC *The Divisions where the Clay and other Materials are plac'd.*

DDD *The Tunnels where the Fire is lighted.*

E *The Upright of the Fruſtum or broken Pyramid.*

FFFFFFFF *The Tunnels through which the Air draws to keep the Fire lighted.*

Note. *There may be two or three Tunnels next the Wind lighted at one Time.*

A Farther ACCOUNT *of the Method of* Burning of Clay; *as Communicated to the Author, by a Worthy and Honourable Gentleman (now a Peer) of* North Britain.

THE following Method of burning Clay; I muſt own exceeds all the Methods I ever yet ſaw publiſh'd by myſelf or others, eſpecially for it's Eaſe and Diſpatch in burning, and the great Quantities that may be produced thereby,

as much more in Proportion (and for the ſame Reaſon) as the burning of Bricks in a Clamp, does that of a Kiln.

Having the following Plan in your Hand, or being well vers'd in the Dimenſions of it, the firſt thing to be done is a Delineation of the Place where the bottom Walls and Tunnels are to run; if it be a green Sward take off the Top of it, where the Tunnels are to be, ſix Inches wide and ſix deep, and with that Turf you may begin your croſs and end Walls, which are firſt of all to be carried as upright as you can, three Foot high; leaving the ſide Walls undone till laſt of all, and till you ſee which way the Wind will ſit to light the Combuſtibles, which muſt be laid on to the beſt Advantage; for in ſetting Fire to the Heap, conſiſts the Succeſs of the whole Affair.

The Uſes of theſe Tunnels thro', or rather under, the Clamp, are to draw the Air ſo as to forward the firſt kindling; and theſe Tunnels are to be covered over with Flags, or flat Stones, Slates, Bricks, or Tiles, ſet as near together as you can, to keep the Aſhes from tumbling thro' and choaking them up; and it muſt be noted, that theſe Tunnels need not be raiſed with Stones or Brick on the Sides, as Drains are, which leſſens the Expence that would otherwiſe attend this Work.

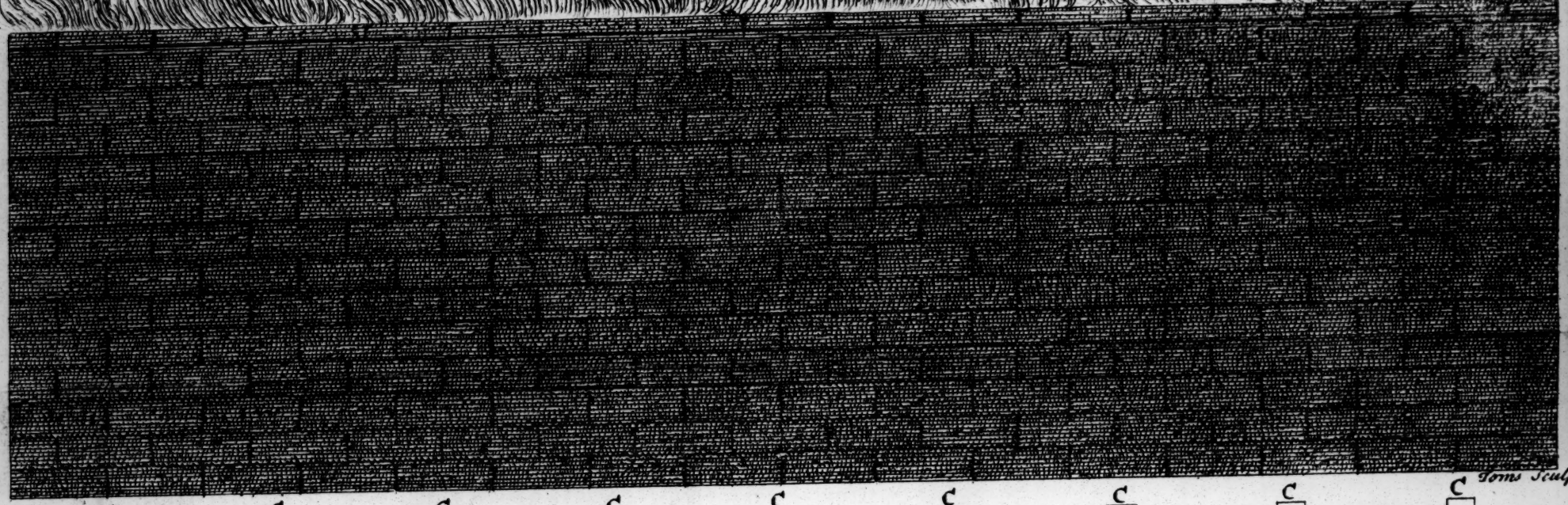
The Turfs of which the Walls are to be made, muſt be twelve or fourteen Inches long, ſix or eight wide, and four or five thick; and the green Sward turn'd downwards as in common banking, and the middle or top Walls are to be as upright as you can, but the Side ones a little ſloping or like a Batten.

The Plan of the Clamp, with the ſide and end Walls, croſs Walls, and Tunnels, the firſt of

which

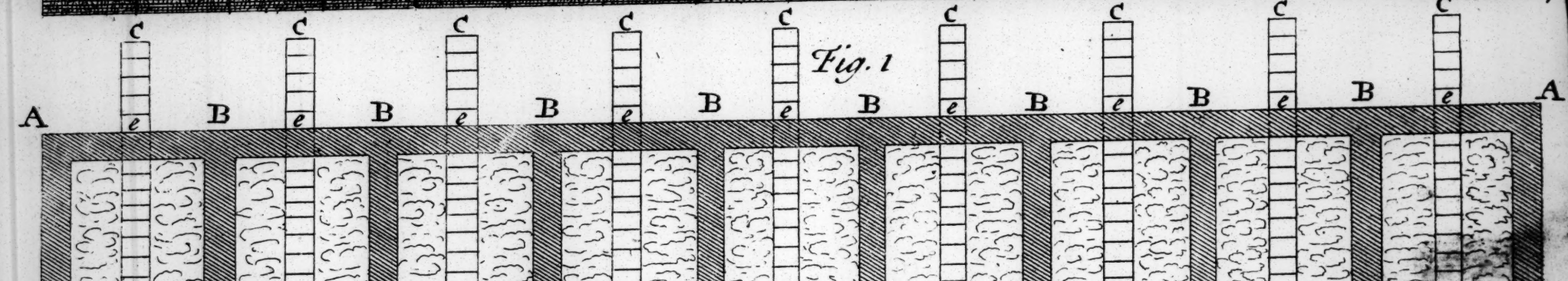
Plate the 2.d

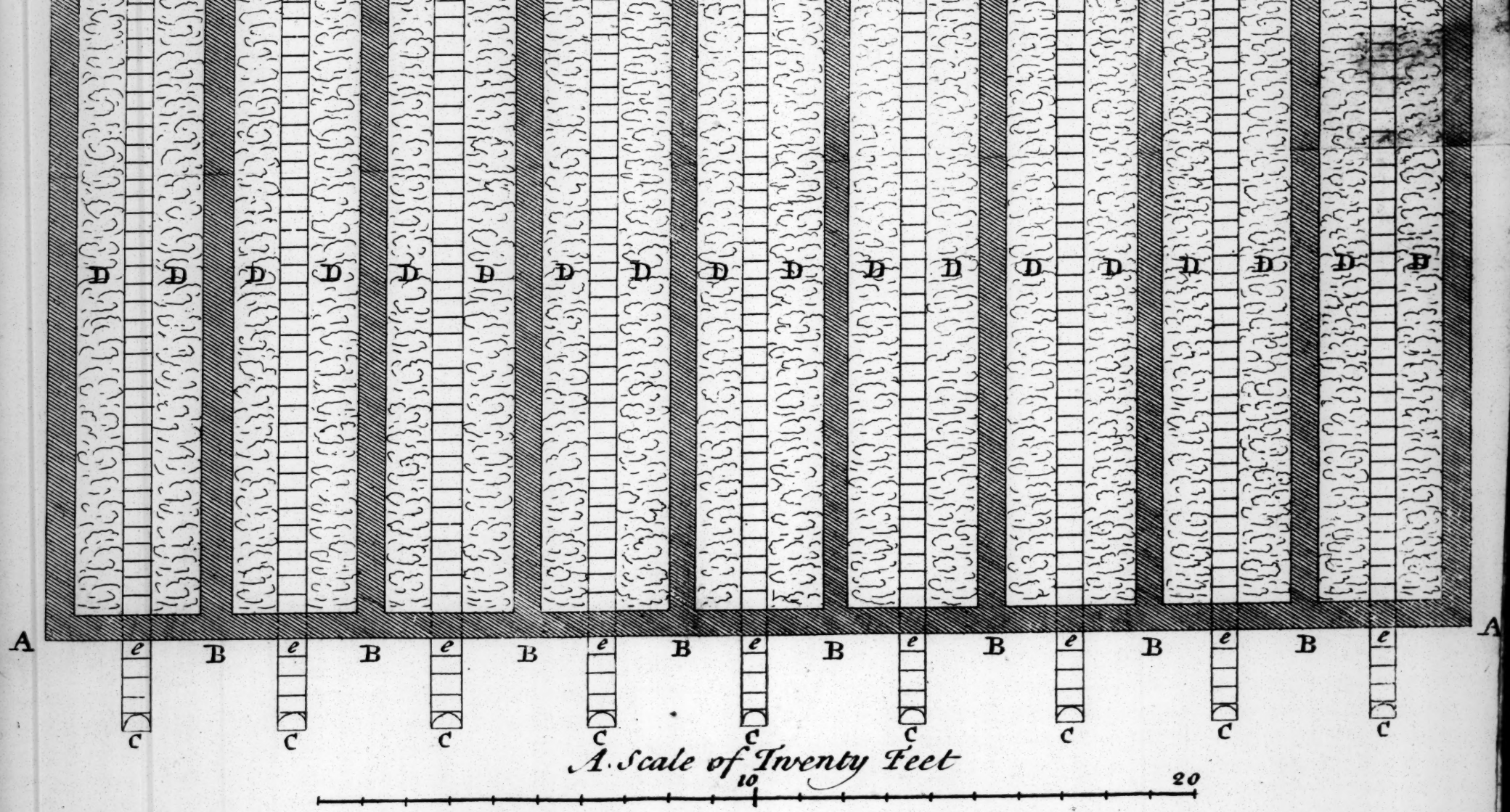
Fig. 2.



Toms Sculp.

Fig. 1





a Plan and upright of a Clamp or Kiln for burning of Clay

which are mark'd upon the Plan, *Plate* II. *Fig.* 13. at the Corners with AAAA. The ſecond are the croſs Walls, BBB, and the Tunnels which project ſome two or three Foot beyond the Side of the Clamp are mark'd CCCC and *eeeeee*, which are the Places where the ſide Walls are carried over the Ends of the Tunnels, being thus laid out, the Funnels dug under Ground, and the croſs and end Walls rais'd three Foot high; the Combuſtibles, conſiſting of old Thacht dry Straw, Fern or Brakes, Furze Buſhes, Brambles, Bavinny or Bruſh-Wood, hard Faggots, Moore or Heath'd Peat, Turf, Coal, hard Wood, *&c.* placed between each Wall at DDDD, the lighteſt Materials below, and thoſe which are heavier towards the top; and when the Combuſtibles before mentioned are laid on, one upon another, in the manner aforeſaid, and upon that, about four Inches of dry'd Clay; that ſide Wall which is oppoſite to the Wind, muſt be raiſed next three Foot high, leaving the other ſide open till the Fire is well lighted, which will ſoon be done, by applying it to the bottom of the Combuſtibles: And when the Materials and croſs Walls, which were before directed to be raiſed, with the dry Clay which is above, are well lighted, you may raiſe up that ſide of the Clamp, which lies fartheſt off from the Wind with Turfs, as the end and other ſide Wall were, to the height of three Foot.

This being done, the wet Clay is to be brought and laid leiſurely, and by degrees, as you perceive them to be lighted, one above another; raiſing up the ſide and end Walls with them, to compreſs or keep in the Heat; but the croſs Walls are not to be continued any higher, than the three Foot firſt mention'd, their uſe being chiefly the firſt lighting of the Fire.

It

It is to be obſerv'd, that this Method of *burning of Clay* in a Camp, requires much leſs Attendance, than the Kiln of any Kind does; for the Fire being once well lighted will (by the help of the Air that draws thro' the Tunnels under the Heap mark'd CCCCC.) keep always in, notwithſtanding any Rains that may happen, even tho' the Work ſhould be deferred till *September*, which often proves a rainy Month; and from the Accounts I have receiv'd from this honourable Gentleman, I think nothing can put it out; however, it will be proper to make the Clamp on ſome riſing Ground, to prevent the worſt that can happen.

The Width of the Clamp ſhould not exceed fifteen or ſixteen Feet, that the Labourers may throw up the Clay on each ſide with more Eaſe. And for the ſame Reaſon, it ought not to be raiſed above eight or ten Feet high, it being impoſſible to caſt it higher without Scaffolds, but may be continued to what length the Owner pleaſes, in the ſame manner as before directed, according to the Quantity of Aſhes the Huſbandman wants, or the Quantity of Clay he has to burn.

There is yet more to be obſerv'd, as to the Nature of the Clay, when it is burnt, and its Uſes in Huſbandry and Gardening; for it muſt needs be very uſeful in both Caſes.

The Perſon who has thus burnt his Clay, ought not to be concerned when he finds, after all his Labour, that the Clay is lumpy, or hardiſh as Bricks are, when they firſt come out of the Clamp: becauſe this happens to all Clay which is ſtrong, though ſtrong Clay is better than that which is ſofter.

When your Clamp is burnt ſufficiently, you are to ſpread the dry'd Bricks over your Ground,

allow-

allowing about ſixty or ſeventy Load to an Acre; the Author of this Account, juſtly obſerving, that all our Allowances on this Head are too little; but this ſhould be applied according to the Nature of the Ground.

Burnt Clay, like all other Manures of this Kind, is of no great Effect in light Lands: ſo that if to Lands, very cold or clayey, you allow ſixty or ſeventy Load, to that which is leſs cold, forty or fifty will do.

When the Clay Bricks are ſpread over the Ground, they will diſſolve by the Winter Froſts; but if any of them remain till the Spring undiſſolv'd, they are then to be beat in pieces with a Mall or Mallet; and after that, you are to take a ſhort tin'd, ſtrong Iron Harrow, and harrow the Pieces about ſo as to diſtribute them more equally; after which, you are to draw a large Roller over them, which will break them to pieces yet more, and this Rolling will be alſo of great Advantage to all Meadow-Land, not only in the preſſing out the Footſteps of the Cattle which feed upon it, but alſo to faſten the Roots of the Graſs, and make the Surface of the Ground the ſmoother.

The Gentleman who has been ſo kind as to communicate this, tells me, that he has not try'd the Experiment on Corn-Lands enough to make any certain Conjecture of the Effects it will have thereon; but that on Graſs-Grounds he had try'd it, with all the Succeſs that could be expected, or even imagined: For having a Mind to compare it with Pigeons-Dung, Soot, Stable-Dung, *&c.* tho' they all advanc'd the Growth of the Graſs in a great Degree, yet none of them produc'd ſo good, or ſo laſting a Graſs as Clay-Aſhes; ſo ſweet, that the Cattle would chuſe to abide and feed upon it, much rather than on any

of

of the other, and would endeavour to bite it, not only to, but even under the Ground; and this Manure, will not only deſtroy all Moſs and Spike, or one pointed ſour Graſs, but alſo produces that which is more ſweet and luſcious, and tho' it does not coſt ſo much as Lime, by a great deal, yet it will have as good an Effect, and the Graſs will be ſweeter, The ſame Gentleman informs me, That Lands, which by neglect, or a wrong Method of Tillage, were reduc'd to the utmoſt Poverty imaginable, ſo as for many Years to produce little or nothing at all that was good; yet by allowing it twice or thrice, and ſpreading theſe Aſhes over it, produced an excellent Crop of Turneps, and ſo he ſuppoſed it would have done of Buck Wheat, or any other Improver of Land, which may afterwards be ſow'd with Wheat, or any other more valuable Grain.

To the BOOKSELLER.

SIR,

BEing informed that a new Edition is preparing of the Method of *Burning Clay*; I think it proper to give the beſt Account I can of the Succeſs of it. In the firſt Place, I muſt acquaint you that I have recieved Letters from my Friend Mr *Knowlton*, in the *North*, and from ſeveral of my Correſpondents in other Places, which give an Account that they are almoſt every where burning of Clay, after the Methods directed in this Tract, with great Succeſs. But the Particulars they do not mention.

I was yeſterday to take a View of what a noble Peer, of the firſt Rank, is doing of this Kind, about ten or twelve Miles from *London*, of which I made mention to you when we met laſt; and find that he has (it being now the ſecond or third Year ſince his Grace began the Tryal) three or four Clamps, if not more, at work in ſeveral Parts of his Eſtate; having this laſt Year manur'd a large Graſs Field or two, with good Succeſs, and his Grace's Continuance of the Experiment in ſo many Places, is, I think, an undoubted Argument, that he is ſatisfied with the Uſe and Succeſs of it. Tho' there was no body at home, who had been actually employ'd in the Affair, from whom I could collect that certain and particular Account, which I could wiſh to have had; nor do I think that the Method they purſue, is ſo exactly agreeable to the Rules laid down by Col. *C——t*, nor that the Clay thereabouts is ſo fit for the Purpoſe as in ſome other Places.

From the beſt Inquiry I could make, I found (contrary to what has been ſuggeſted by ſome) that the ſtrongeſt Clays are the beſt for this Purpoſe, as containing a greater Quantity of Salts than other Clays, ſince it is plain, from what I could here collect, that ſome of their ſtrongeſt Clays will liquidate and turn into Lumps, like the Refuſe or Droſs of Glaſs, upon the firſt Approach of Heat, and will not diſſolve by any means, and that all very ſtrong Clays, contain more or leſs of theſe droſſy Parts.

It is brought as a conſiderable Argument againſt what my good Friend the Colonel aſſerts, that Dung will cauſe Graſs to grow as faſt as burnt Clay will, but that it is not (as no body pretends to deny) ſo ſweet, or that the Graſs, and conſequently the Hay, is ſweeter and better from Clay-Aſhes than Dung; but ſuppoſing it true, that Dung is as cheap, and will improve Graſs and other Ground as much, and to as good a Purpoſe as burnt Clay does; there are ſome Places where Dung cannot by any means be procured to improve half the Quantity of Ground that a Farmer has, on which Account they are forced to have recourſe to Sea-Sand, Marle, Chalk, Lime, Pond-Earth, *&c.* ſuch as they can procure beſt to make up the Quantity they want to improve every Part of their Farm. But then two or three of theſe Kinds of Improvements are not to be met with in all Places, and I can mention two, *viz.* Sea-Sand and Marle, that are not to be had within twenty or thirty Miles of above two thirds of this Kingdom, tho' they are the beſt and moſt natural Helps that can be procured either for Land which is wet, cold, and poor, or hot and ſandy; for Lime, which is the eaſieſt to be had of any other Manure, is well known to be a Cooler and Conſolidator of Land,

(tho'

(tho' ſometimes us'd by Miſtake on thoſe which are cold and clayey) ſo that in ſome midland Counties, 'tis very certain that there can be no Improvement procur'd either ſo good or ſo cheap, for cold ſpewy Lands, as burnt Clay is.

I was indeed a little ſurpriz'd to find, that the Perſons with whom I convers'd on this Subject, ſhould intimate that the Expences attending the burning of Clay ſhould be 3 *s.* 6 *d. per* Load; when I was aſſured by my worthy Friend and Correſpondent, that it might be done a great deal cheaper, even for 4 *d.* or 6 *d. per* Load at moſt; but this muſt needs be owing either to the dearneſs of the Combuſtibles, (ſome of which may poſſibly take their March a different Way than to the Clamp) or to an old and well known Truth, that no body pays ſo dear for their Improvements as great Men do; ſo that I am not at all doubtful but this is a miſtaken Account.

There are ſtill thoſe to be found, who, being averſe to all new Improvements, endeavour, without any juſt Knowledge of the Value of the Experiment, to decry this uſeful Improvement (which I will not abſolutely take upon me, till farther Trial, to vindicate) yet from what I have ſaid before, as well as from the Poſſibility there is of farther advancing the Uſes and Improvements of it, I will take upon me to ſay, that there is nothing, but is very agreeable to Reaſon in the whole Scheme before laid down, provided it be purſued with Regularity and Attention, the two great Inſtruments, by which all Improvements are brought to Perfection; and for want of which the beſt Inventions are laid by as uſeleſs, and not worth Notice.

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pliſh'd,, in Kilns or Clamps, are as obvious as any Thing in Nature, to thoſe who ever ſaw the burning of Bricks this Way, provided the bottom Tunnels and Foundations are well laid.

The putting of Small Coal, or any other Combuſtible between each Laying of Clay, as they do between thoſe of Brick, are evidently known, when well and carefully perform'd, to produce the ſame Effect: And it is well known, that Bricks, even after the Clay has been well temper'd, often come out ſamell'd or half burnt; how much more then muſt Clay come out ſo, that has not been temper'd at all; nor is it difficult to imagine, even tho' it had never been actually and experimentally ſeen, how that a Hill or Mole, well lighted at firſt, ſhould heat to ſuch a Degree, as to dry and burn all above, tho' green and wet, if laid on diſcretionally, and by degrees; and Heath, Fern, Goſs, Small-Coal Duſt, *&c.* are ſo eaſily to be procur'd in moſt Countries, that the Difficulties cannot be as the Oppoſers to this Scheme would fain have it.

To conclude; notwithſtanding the Oppoſition it has met with, from the Sloth and Ignorance of ſome, and the Conceit and Ill-will of others, I hope, as near as I can gueſs, from the great Experiments which are now making, to be able, after my Return from the long Journey I am going, to give you ſuch a farther Account of it, as will make this Improvement what I have always (out of Regard to the publick Good) wiſh'd it ſhould be, one of the cheapeſt and moſt uſeful, that this or any other Age has produc'd: But if there ſhould be any Obſtacles that ſhould put a Stop to it (the Experiment not having been either expenſive or dangerous) we ſhall, I doubt not, meet with the Approbation of all virtuous good Men,

who don't judge of Things from their Event, but as they were juſtly intended for the Benefit of Mankind.

I am Your's, &c.

STEPHEN SWITZER.

POSTSCRIPT.

I am very ſure that if this Manure be well managed it can't coſt more than 12 *d.* or 18 *d.* a Load, and I obſerve, the going out of the Fire in ſome places, proceeds from the Negligence of the Workmen, who don't lay that good foundation of Combuſtibles which is requir'd to continue it: And becauſe they don't make their Turf Walls round the ſame, cloſe enough to compreſs the Heat that ought to labour within. Any one who has obſerved any Thing of Brick Clamps, may have taken notice how careful Brickmakers are in plaiſtering the Outſide of their Clamps cloſe with ſtrong Clay, to keep in the Heat, and make it more uſeful, which ought alſo to be obſerv'd in this Work of burning Clay, for the ſame Reaſons.

FINIS.

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